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STATISTICAL SURVEY
OF THE
COUNTY DUBLIN,

WITH
OBSERVATIONS

ON
THE MEANS OF IMPROVEMENT;

DRAWN UP FOR THE CONSIDERATION, AND BY ORDER

OF
The Dublin Society,

BY
LIEUTENANT JOSEPH ARCHER.

AGRICULTURE is the first and real opulence of a State. Next to God, Labour is the first Duty of Man; and the most important of all Labour, is cultivating the Land. It forms the internal Strength of States, and occasions Riches to circulate into them from without. Cities will only be flourishing, in proportion as the Fields are fruitful.

Abbt Raynal.

Dublin :

PRINTED BY GRAISBERRY & CAMPBELL, 10, BACK-LANE.

1801.

TO THE READER.

This REPORT is at present printed and circulated for the purpose merely of procuring further information, respecting the state and husbandry of this district, and of enabling every one interested in the welfare of this country, to examine it fully, and contribute his mite to its improvement.

The Society do not deem themselves pledged to any opinion given by the Author of this Survey; and they desire, that nothing contained in it be considered as their sentiments; they have only published it, as the report of the gentleman, whose name is affixed, and they publish it, for the comments and observations of all persons; which they entreat to be given freely and without reserve.

It is therefore requested, that the observations on reading this work may be returned to the Dublin Society, as soon as may be convenient, and which will meet with the fullest attention in a future edition.

ROYAL
DUBLIN
SOCIETY

LIEUTENANT GENERAL VALLANCEY,

OF THE

ହେଁ, ଏହେଁ, ଏହେଁ.

WHEN, under your patronage, I undertook the arduous task of making an Agricultural Survey of the County of Dublin, I was emboldened to proceed, though with diffidence, in so extensive an enterprize. But well knowing the conspicuous part you bear in the advancement of agriculture, manufactures, and the fine arts, and the wish to promote the welfare of Ireland, added vigour to my proceedings. The fluctuating state of property in this county increased the difficulties to the necessary information; I have, nevertheless,

b

nevertheless,

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nevertheless, Sir, to hope, that perseverance has nearly accomplished your instructions. I sincerely wish, that the object of your desire may not suffer by not being put into abler hands.

I have the honor to be,

Your most obliged,

And most obedient humble servant,

JOSEPH ARCHER.

DUBLIN, Sept. 14,

1801.

PREFACE.

P R E F A C E.

THE rapid progress of agricultural information, so generally diffusing at present throughout Ireland, makes the Statistical Surveys peculiarly useful at this critical period. We may boast of a country capable of the greatest improvements in many respects. It abounds with mines, that, if worked, would enrich the inhabitants in a great degree. But taking Ireland in an agricultural view only, it can be rendered highly prolific, inasmuch as reasonably to double the stock of cattle at present existing here, by prudent management of *green winter crops*, and *laying aside fallows*.

The illiberal prejudices, that have so long disgraced this country, will, it may be hoped, give place to better policy, and agriculture, arts, and manufactures be now brought forward with heart and hand, and reciprocal attention paid to the patriotic exertions of those
Societies,

Societies, which are labouring to spread a general knowledge and improvement of their native soil.

The liberality, in point of information, that I experienced from many, during my researches, have my particular thanks. A few instances occurred, where I have to regret, that the attention the subject deserved was *not given*; it might have been hoped, that a general spirit of emulation would pervade ALL, upon a subject in which ALL were concerned—
THE PROSPERITY OF IRELAND.

I protracted the Survey in hand longer than I intended, in order to revise and take a retrospect of the whole again, to have it as perfect as possible; by doing which, I found it necessary to alter, amend, and add many particulars, in which I was before deficient, from their having been of such a desultory nature, and collected from such a variety of objects, that I am, nevertheless, still conscious of defects, that may in time be remedied by more perfect information. No doubt but some matters have escaped my notice; such as I have obtained, I derived from the purest sources of practice and observation that I
was

was able, in order to render it worthy of the Dublin Society's and public attention. How far I have been able to attain the wished for statement, will be in the breast of the Society to determine; I trust they will believe I have used my best endeavours, and, if any involuntary defects appear, will make all necessary allowance, having used every means to render them as few as possible.

The principal subjects, and what I conceived to be most interesting to the general welfare, I chiefly enlarged upon. The course of crops, in the second chapter, I thought of this description, and have there proposed a succession, that, if followed, would be of material consequence. I have also recommended some implements of husbandry, and very particularly the use of green food for winter and summer feeding for cattle; this is *inseparably connected* with a *good course of crops*, and is a *great object* to the IMPROVING the BREED of CATTLE.

The charitable institutions occupied a great part of my attention, as I found them very extensive, and greatly interesting.

The

The woollen manufacture, which is of the most important consequence to Ireland, I have given an extensive account of from Mr. Nixon. It appears to me, from several conversations I have had with him, that this business (now that machinery is established) could be promoted in a very extensive degree, were the proper measures adopted, which he would himself explain to the Society, if called upon.

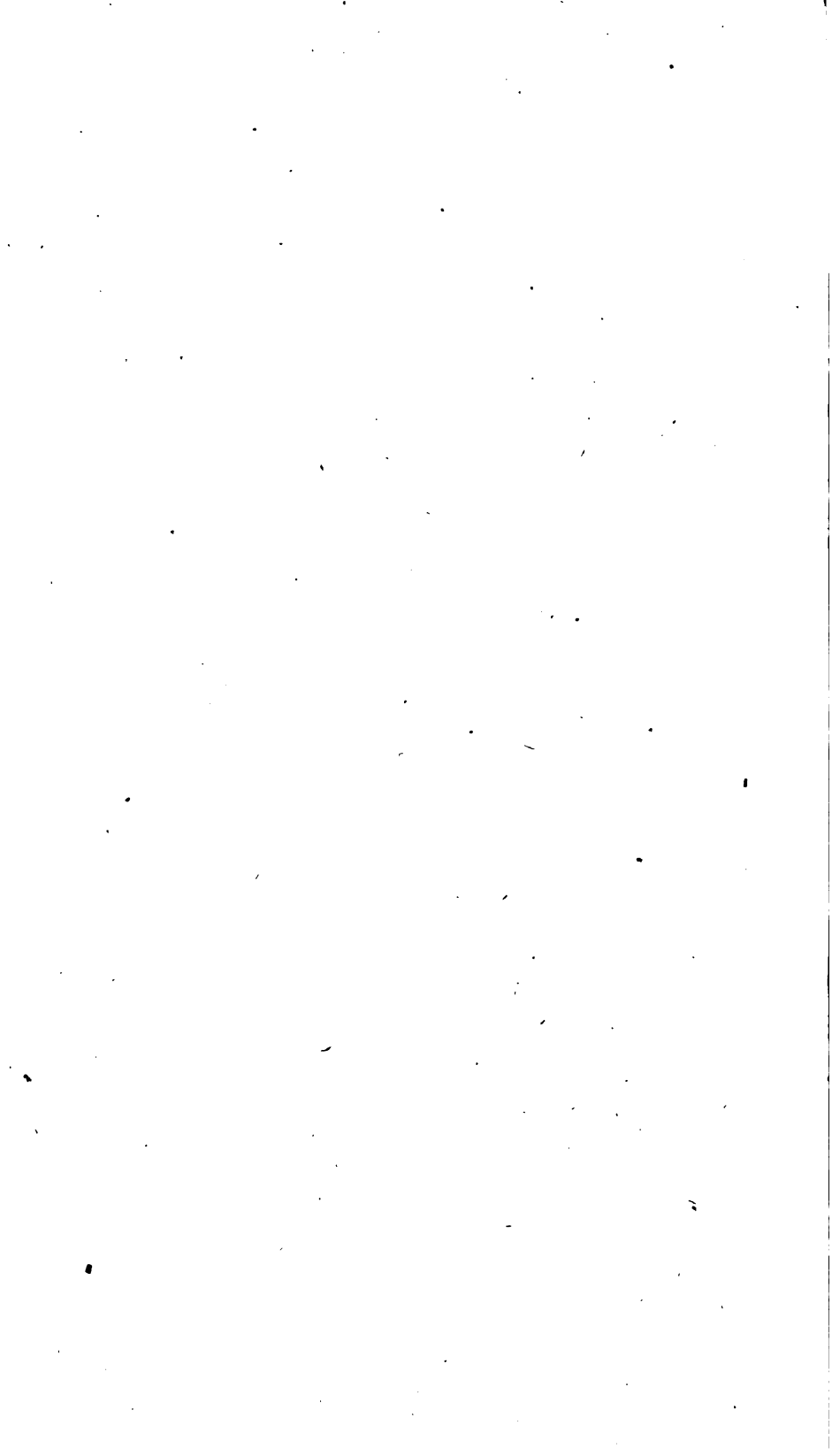
Agriculture, enclosing, and draining waste lands, planting, irrigation, and improvement of wool, are points, in which we are still defective, and call for redress. I have suggested a few ideas for the improvement of these subjects, which I derived from various sources of observation and experience, during a practice of several years in England, where I endeavoured to attain every information upon the most improved methods, as they occurred.

In arranging the work, I have followed the statement, as delivered by the Society. I at first endeavoured to particularize the baronies in agricultural descriptions, but I found that the practice was so similar, the county so small, and the tillage so defective in importance, that it weakened the subject, by dividing it.

it. I therefore, as a matter of necessity, followed the plan, in the order laid down, as the most eligible.

I look forward with a pleasing hope, that, on the re-printing of this and other Reports, more valuable information may be collected, than this first effort of industry has been able to acquire; being strongly impressed with the important utility of adding every mite to the mass of knowledge, so essential to the GRAND DESIGN, and in which my own labours shall not be relaxed.

SUGGESTIONS



SUGGESTIONS OF ENQUIRY

FOR GENTLEMEN WHO SHALL UNDERTAKE THE FORMING OF

AGRICULTURAL SURVEYS.

GEOGRAPHICAL STATE AND CIRCUMSTANCES.

Situation and Extent,
Divisions,
Climate,
Soil and Surface,
Minerals,
Water.

AGRICULTURE.

Mode of culture,
Extent of it, and of each species of grain sowed,
Course of crops,
Use of oxen—how harnessed,
Nature and use of implements of husbandry,
Markets for grain,
Use of green food in winter.

PASTURE.

Nature of it.
Breed of cattle—how far improved,
————— how far capable of further improvement,
Markets or Fairs for them,

General

General prices,
 Modes of feeding—how far housed in winter,
 Natural grasses,
 Artificial grasses,
 Mode of hay-making,
 Dairies, their produce,
 Prices of hides, tallow, wool, and quantity fold.

FARMS.

Their size,
 Farm houses and offices,
 Mode of repairing them, whether by landlord or tenant,
 Nature of tenures,
 General state of leases,
 ——— of particular clauses therein,
 Taxes or Cesses paid by tenants,
 Proportion of working horses or bullocks, to the size of farms,
 General size of fields, or enclosures,
 Nature of fences,
 Mode of hedge-rows, and keeping hedges,
 Mode of draining,
 Nature of manures.

GENERAL SUBJECTS.

Population,
 Number and size of villages and towns,
 Habitation, fuel, food and cloathing of the lower rank—their
 general cost,
 Price of wages, labour and provisions,
 State of tithe, its general amount on each article—what arti-
 cles are exempt, and what charged by modus,
 Use of beer and spirits—whether either or which is increasing,
 State of roads, bridges, &c.
 ——— of navigations and navigable rivers,
 ——— of fisheries,

State

State of education, schools, and charitable institutions,

- of absentee and resident proprietors,
- of circulation of money or paper,
- of farming or agricultural societies,
- of manufactures, whether increasing,
- of encouragement to them, and the peculiar aptness of the situation for their extension,
- of mills of every kind,
- of plantations and planting,
- of the effects of the encouragement heretofore given to them by the Society, particularised in the list annexed.
- of any improvements which may occur, for future encouragement, and particularly for the preservation of the trees, when planted.
- of nurseries within the county and extent of sales.

Price of timber and state of it, in the county,

Quantity of bog and waste ground,

Possibility and means of improving it,

Obstacles to it and best means of removing them,

Habits of industry, or want of industry among the people,

The use of the English language, whether general, or how far increasing.

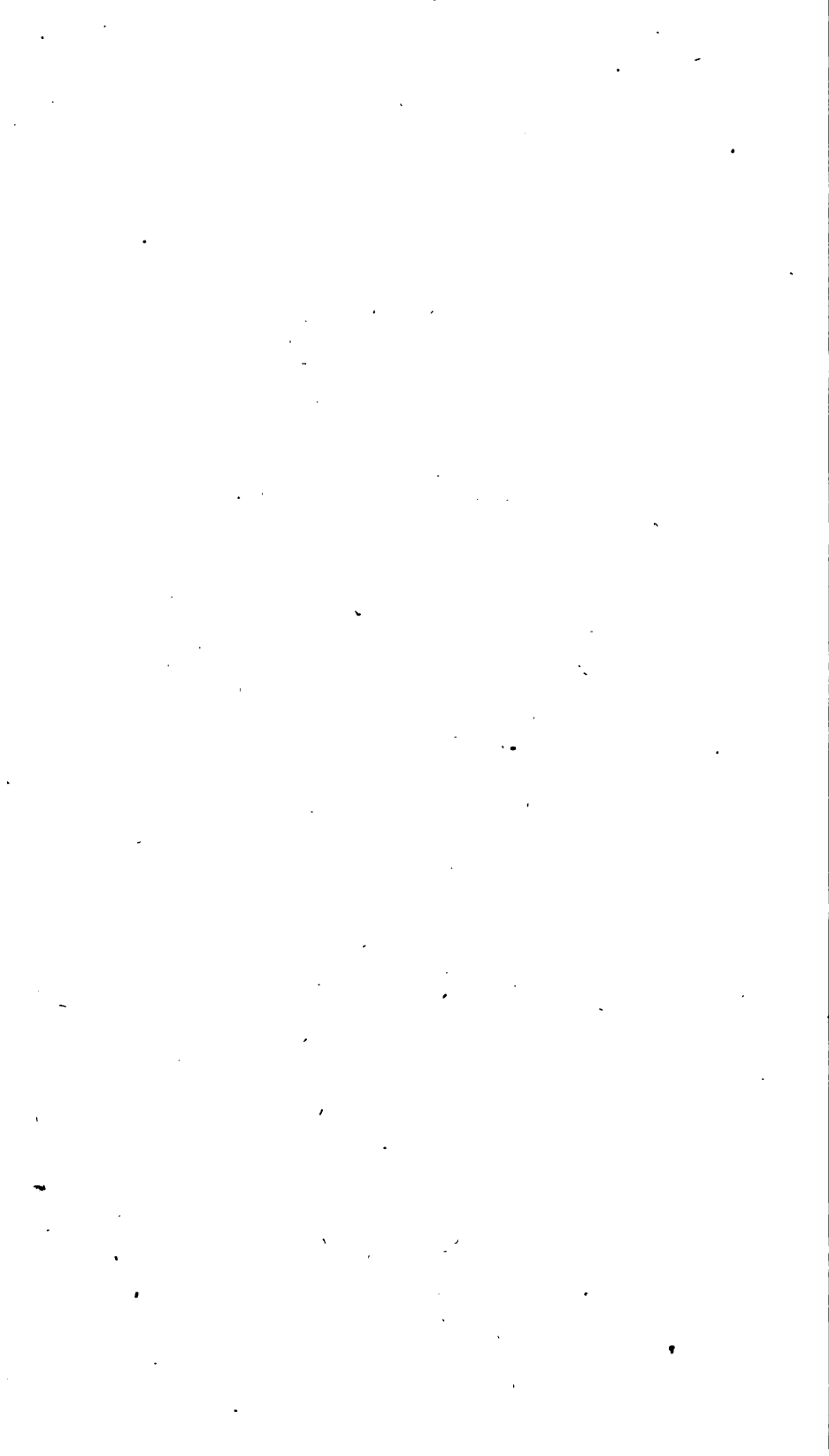
Account of towers, castles, monasteries, ancient buildings, or places remarkable for any historical event,

Churches—resident clergy, glebes and glebe houses,

Whether the county has been actually surveyed, when and whether the survey is published.

Weights and measures, liquid or dry—in what instances are weights assigned for measures—or *vice versa*.

The weight or measure by which grain, flour, potatoes, butter, &c. are sold.



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STATISTICAL

STATISTICAL SURVEY

OF THE

COUNTY OF DUBLIN.



CHAPTER I.

GEOGRAPHICAL STATE AND CIRCUMSTANCES.

SECT. I.

Situation and Extent.

THE county of Dublin is situated between $53^{\circ} 10''$ and $53^{\circ} 37''$ N. latitude, and between $6^{\circ} 4''$ and $6^{\circ} 36''$ W. longitude of Greenwich, on the eastern coast of Ireland. It is bounded on the east, from Bray-Head to Balbriggan, by the Irish sea, being an extent of about thirty miles, if the irregularities of the coast be followed. From near Balbriggan by the north and part of the west, to within a mile and a half of Leixlip, it is bounded by the county East Meath, being about twenty-

three miles, following the irregularities of the boundary; from thence round the west and south-west, for about ten miles, it is bounded by the county of Kildare; from thence to Bray-Head to the south, it is bounded by the county of Wicklow, about fifteen miles in extent, nearly all mountain.

The whole county contains 231 square miles, or 147,840 square acres, of which the mountains and wastes occupy nearly one-eighth,

	Square miles	Square acres
Or,	29	18,560
Hedges, ditches, buildings, roads, and rivers, about one-tenth,	23	14,720
Hay and pasture, - - -	86	55,040
Corn of all sorts, and potatoes, -	93	59,520
	<hr/> 231	<hr/> 147,840 <hr/>

SECT. 2. *Divisions.*

THE county is divided into six baronies and a half, as follows:

Balruddery,	}	North of the river Liffey.
Nethercross,		
Coolock,		
Castlenock,		
Newcastle,	}	South of the river Liffey.
Uppercross,		
Half Rathdown		
		The other half in the co. Wicklow.
		Balruddery

OF THE COUNTY OF DUBLIN.

3

Balruddery and Nethercross, including the adjoining parts of Coolock and Castlenock, are more peculiarly adapted to tillage, as being more remote from the capital than the other baronies; the high rents near the city would not answer for corn, but, on the nearer approach of the two latter baronies to Dublin, lands being of more value in pasture, and the rents too high for tillage, they are converted to the former use, principally for dairy cows, horses, hay, &c. Very little tillage is carried on in the baronies south of the river Liffey, viz. Newcastle, Uppercross, and half Rathdown; the remote south parts of these divisions, bordering on the county of Wicklow, being for the most part uncultivated heath, and rocky mountain, unfriendly to vegetation, and great part of them difficult to be brought to any manner of cultivation, or to answer any purpose whatever; those parts, I mean, that are covered with loose rocks, and destitute of soil.

SECT. 3. *Climate.*

THE farmers at the declivity of the mountains, mentioned in the last section, are later in sowing and reaping than those in the low flat land, the air being there moist and sharper, which, they say, prevents the plough moving so early in the spring, as a lower or more level situation would admit. The crops of hay and corn in general through the county, appear to be later than those

produced in the same latitude in England. Perhaps this may proceed from the cold, clayey, and damp nature of the land, the draining and improving of which would assist the climate. Easterly winds are very prevailing in April, and check vegetation, sometimes after it has made some progress. Rain has been more frequent formerly than for the last two years. The south-west and southerly winds, which, wafted over from the Atlantic Ocean, are the prevailing winds in this climate, and generally bring rain, blow over a great part of Ireland, before they reach the county Dublin, and the mountains, in the passage of those moist vapours, condense and attract a great part of them; which circumstance occasions less humidity in this county, than is experienced in the south-west parts. Snow seldom continues long on the ground near the sea-coast; this, if attended to, ought to hasten the operations of husbandry in the spring, as corn is seldom sowed as early as it should be.

SECT. 4. *Soil and Surface.*

THE vegetative soil of this county is very shallow; the quantity of scavengers' dung, or fulliage of the streets, brought from the city for about four miles round, has, however, greatly improved it. The sub-stratum is almost universally a cold clay, containing water like a dish, and keeping the surface in an unprofitable state, unless

OF THE COUNTY OF DUBLIN.

3

unless where draining and proper attention has been paid to improving it; by this means, in numberless instances, it has effected a total change in the soil, and makes a striking contrast between it and any adjoining unimproved land. There is a small quantity of turf-bog in the northern parts, such as at Garristown, which contains about four or five hundred acres on the borders of the county, the principal part bog, and the like quantity of the same bog extending into the county of Meath. The common of the Ring, near Balruddery, is also partly composed of bog; in the south there are also turf-bogs, in the mountains adjoining Montpelier and Kilmahogue, which alone cover three or four square miles. Great part of those mountains have an irregular surface, and great acclivities, and are in many places covered with rocks and stones, so as to render them nearly useless for any purpose that I know of, except planting the crannies of the rocks with seeds of different hardy trees. Turning from this gloomy prospect to the interior of the county, a most beautiful scene opens to our view, of numbers of pleasant villages, and ornamented country seats, abundantly spread over the surface. Were there more trees combined with this elegant scene, it would be highly interesting and advantageous. There are a few salt marshes interspersed along the coast, but none of any consequence as to size.

SECT.

STATISTICAL SURVEY

SECT. 5. *Minerals.*

THERE are great quantities of good quarries of free-stone south of the city of Dublin; limestone quarries abound in various parts of the county; there is also limestone-gravel in great plenty. There are several fine veins of marle in that part of the mountain lying between Montpelier, Bournabreene, and Tallagh-hill, and I found a vein of fuller's-earth at the west side of Castlenock-hill; I took up a sample from the surface, which I produced to two eminent clothiers; one of them tried it upon a piece of cloth, and, though he informed me it did not *effectually* answer the same purpose as the English, yet little doubt was entertained but, by digging deep into the vein, it might be obtained of so pure a nature, as to answer the intention. It is worthy of a fair trial, as the imported fuller's earth is half a guinea a hundred weight.

This county contains mines of several kinds. Where any indications of those sources of wealth appear, search should be speedily and vigilantly entered upon. Mineral waters are a certain sign that there is some mine in that place, and there are different waters of that description in the county; boring is the surest and cheapest method of discovering what kind it is. There are often detached bits of minerals lying upon the surface, that may also lead to a discovery.

I have

I have no doubt but coal might be obtained in different parts of the county. On the west side of Knockmaroon-hill, near the low road leading to Lucan, there were some trials made about twenty years ago, which appeared to me to have been rather improvidently conducted, and hastily abandoned. As well as I could ascertain it, there had been five pits sunk, almost close to each other, all which had been filled up again, except one; this I fathomed, and found to be eighteen yards deep, fourteen of which contained water. The spot chosen for this experiment was injudicious; it was in a deep valley, where in coal countries it is most commonly found, that veins are broken off, and thrown out of their course. In this situation it is sometimes found so shuffled, and mixed with the other stratum, that a jumble of rubbish is sometimes discovered in the place of a perfect vein, when perhaps within forty, or even thirty yards, it might have been discovered in its perfect state. But the expenses of sinking shafts to explore those hidden recesses of nature are saved, when performed by the mining augur. In the above instance, the pits were dug in the most laborious and expensive manner, with the common instruments. A comparative trifling expense, by this operation of the augur, brings the enterprise to a certainty, and encourages the undertaker to persevere in the attempt. The advantages, that might be gained to the proprietors of those estates, where coals are found, would be an object of great magnitude. But what would this be, when placed

placed in competition with the advantages, that might accrue to the city of Dublin, and finally to all Ireland, were the numerous collieries interspersed through the country to be brought into action; by keeping so much capital at home, to apply to our infant arts and manufactures? Other parts of the county have been tried for coal with success, but by some strange fatality the trials have not been pursued.

All veins of coal, that I have ever observed, run horizontally E. and W. and dip S. more or less, but the same vein keeps the same inclination regularly throughout; some pitch a yard upon three, some more, some less, and rise to the N. sometimes within five or six feet of the surface, and I have commonly observed, that the best caking coal is nearest the sea.

I observed near the Naul, in several places about the ditches, *crops* of different veins of coal, which indicated an abundance of it in that neighbourhood.

If any gentleman is desirous of information upon this point, where there was any *probability* of success, I would very willingly give him such instructions on the spot, as might forward his wishes to the best effect.

There is fine yellow ochre, and in great abundance, for miles round the Naul.

At Loughshinney there is a copper mine, that, when worked, I was informed, was very productive; but it is now stopped, and the level, that was made for carrying off the water, going to ruins. I was informed, that the owner of the land had a twelfth of the produce, besides
a sum

a sum in hand at the commencement of the business, but some trifling disagreement, when all was compleat, had put a stop to this fine work; we may, however, reasonably suppose, that so valuable a business will not lie long neglected, but will be soon again brought forward with energy and durability.

SECT. 6. *Water.*

THIS county possesses great advantages from its being extended so far along the sea coast; this enables the markets to be well supplied with fish, and mercantile business to be carried on with facility.

The river Anna Liffey is the principal in the county, and runs nearly through the middle of it, and also through the city, discharging itself into the Bay of Dublin; a few other streams of no considerable note empty themselves into this river, and have a number of mills for various manufactures. This river is navigable for large vessels up to the New Custom-house, at Carlisle Bridge; formerly, before the building of this bridge, merchant vessels and colliers came up as far as Essex Bridge, to the Old Custom-house; gabberts or any other small craft, that can pass the arches of the bridge, find a navigable passage at high water, in spring tides, to Island Bridge; small boats further than Chapel Izod; spring tides rise at Carlisle Bridge about thirteen feet.

The

The next river worthy of notice is the Dodder, which taking its rise in the mountains, and running by Rathfarnham, Milltown, and Donnybrook, discharges itself also into the bay at Ringsend. Temple Oge and Kimmage river is a branch of the Dodder, and formerly supplied the city basin entirely with water for the convenience of the inhabitants of Dublin, but now only in part, as the Grand Canal is taken in aid for their more ample relief.

There is also a small stream, that joins the Dodder at Rathfarnham, that supplies a few mills.

Ballybough river is the next worthy of any attention; it is scarcely deserving of the name of a river, but is nevertheless subservient to a few mills in its course, and empties itself at Clontarf. Several other small streams run through different parts of the county, that with difficulty keep a few mills at work, at intervals, in the summer. Between the counties of Dublin and Meath, on each side of the Naul, there is a very good stream, that runs a few miles on the borders of the two counties, capable of containing a number of mills for manufacturers of woollen or cotton, flour, &c.

The description of the Grand and Royal Canals will come more properly under the head of navigations and navigable rivers.

CHAPTER II.

AGRICULTURE.

SECTION I.

Mode of Culture.

THE county of Dublin exhibits but a very small proportion of tillage, in the vicinity of the metropolis, the land being occupied by gardens, nurseries, dairy cows, and horses. In the remote parts of the county, particularly in the N. and W. there are tillage farms. The general mode of cultivation is thus; the first year the occupiers dung and plant potatoes, after the old Irish method, in beds, next wheat, sometimes oats after, and then wheat again; frequently two crops of wheat in succession, and sometimes two of oats following. Barley is not so frequently sown as other grain; clover is sometimes sown with oats, and sometimes with barley. The clover is not always used to the best advantage. When breaking it up for wheat, they frequently give it two ploughings, whereas it ought never to

to be ploughed more than once, and that, after mowing the clover, as it will produce a better crop after mowing than after grazing it, owing to the land having been covered with a thick smothering crop immediately previous to the ploughing, and by this means it is in a fine meliorating state. I had a favourable account, on my survey, of the good effects of the encouragement held out formerly by the Dublin Society, for sowing clover lea with wheat on one ploughing; I was informed that it answered their utmost expectations. Clover should be kept but one year, reckoning from the crop of corn, in which it grew, until it is ploughed for wheat. The best method would be, to depasture the first growth until the latter end of May, and mow the second in the latter end of August or beginning of September. The farmer should at least have some of this crop for seed for himself, and he should mow that part for hay at an earlier period, perhaps a fortnight or three weeks sooner, than the part designed for seed, and as soon as the hay is off plough directly, and sow the wheat under the harrow; the ridges may be about six or seven feet wide, and shovelling some mold from the open furrow over them, is a beneficial practice, which in a number of places is well attended to, and adds considerably to the crop of wheat.

Barley, as I before observed, is but seldom sown in comparison of oats; this is apparently right, the ground being in many farms too humid or clayey, and therefore not suitable to this crop. Wheat, that is sown after potatoes

tatoes, is sometimes covered with the harrow, and sometimes with the plough; when sown on a fallow, it is almost universally under the plough. Potatoes are mostly planted in beds of six or seven feet wide, and the trench two and an half or three feet wide. The drill method is gaining upon this practice, as being found much more advantageous in every respect.

Ploughing is seldom so neatly put out of hand as it ought; there are certainly some good specimens of ploughing in different parts of the country, but the common instrument in use does not appear well calculated for the best work; if it is not ploughed straight, it cannot be done well, or to advantage for the crop. The common, blunt *metal* shares, so indiscriminately used upon all soils, and appearing to me to be adopted for cheapness, render it impracticable to obtain good work in every situation. For example, stoney land requires a long small pointed share, to work in between the stones; one of the stubbed metal shares, in such ground, must unavoidably be thrown frequently out of its place, from the resistance of stones, consequently bad work performed, when a proper share, adapted to the soil, would work its way with regularity and exactness. A good plough is so essentially necessary, that it is impossible to perform good work without it. The common plough, used in this county, is but a middling instrument, even when well made; there are much better in use. The requisites for a proper plough are easy entrance, steadiness, easy draft, and particularly its being made to subvert

subvert the furrow with a gradual cast; to accomplish this, every furrow should be perfectly similar in breadth and depth, that each may fall into the bosom of the former, which cannot be accomplished if ploughed crooked. The plough must be held steady, and the furrow carried through as straight as a line. The breadth of each furrow, should not be less than seven inches, nor more than nine in any case, except sowing under furrow; in that case five inches will be a sufficient breadth, and the proper rule or proportion for the thickness or depth of the furrow ought never to exceed two thirds of its breadth; therefore, if the furrow is too narrow, the depth will be but trifling. The fin of the share ought to cut under nearly the breadth of the furrow, particularly in strong rusty ground, otherwise the resistance of the uncut part will require a strong purchase to wrest it to its place.

Land has been too often laid down to pasture without the smallest attention being paid to a proper selection of natural or artificial grass seeds. The draining and amelioration of the soil has been often equally neglected. But agriculture is at this time making such progress, that those bad customs are beginning rapidly to subside, and we now see with pleasure the more frequent cultivation of clover and other grasses, an alteration, which indicates a much better mode of tillage than what has hitherto been adopted.

The direction for ridges or drills, is a matter I have observed to be but little attended to in the sowing of any crops

crops; they should be placed so as to enjoy the full benefit of the sun as far as circumstances may admit. The N. W. and S. E. position will be found most advantageous. It can scarcely escape the notice of any common observer, how superior a crop is on the south side of a ridge, to that laid out in a contrary direction; in potatoes this is remarkably conspicuous.

The old mode of fallowing prevails still through the whole county, but clover, it is hoped, will soon supersede the necessity of this; although I am sorry to observe, that even clover in those enlightened times is *sometimes* fallowed.

SECT. 2. *Mode of Culture, extent of it, and of each Species of Grain sowed.*

THOSE farmers who are remote from the capital, and occupy tillage farms, generally sow in the proportion of sixty acres out of every hundred in their possession, nearly in the following proportions.

	<i>Acres.</i>		<i>Acres.</i>
Wheat and Fallow	20	Meadow, including	} 20
Barley	10	Clover	
Oats	25	Pasture	20
Peas and Beans, none.		Potatoes	5
Vetches, but little.			

Nevertheless

Nevertheless, some farmers only sow half, and some one third of their farm.

The greatest exertions have been made by the farmers in breaking up lea for different corn crops; there never was an instance of so much ground under tillage in this county; potatoes bear a conspicuous part in these exertions. The Right Hon. D. Latouche must be ranked amongst the foremost of the potatoe cultivators; he has not only twenty acres, at Marlay and St. Catherine's, of this valuable root, planted in drills, and in high order, but after being well hoed, they were planted with borecole, between every drill, for winter feeding cattle, a most excellent practice, and well worthy of imitation. Robert Wynne, Esq., at Clonilla, is extensive also in the potatoe husbandry; at my last visit, sixteen acres, mostly in drills, were almost finished; some of his neighbours vie with him in their exertions, and many other parts of the county have made the most laudable efforts of imitation, having met numbers of plantations exceeding ten acres! If a favourable harvest should succeed these endeavours, we may next year hail the happy return of plenty.

SECT. 3. *Course of crops.*

MR. Thomas Lenahan, of Rodanstown, occupies near two hundred acres of tillage land, and practises the following course or mode of culture.

First

First year fallow.

Second do. wheat.

Third do. oats or barley,

and fallow again, sometimes taking a second crop of oats or barley; he sows clover with the last mentioned crop, which he afterwards puts under wheat with one ploughing, but, nevertheless, fallows some every year.

Mr. James Johnston, of Corballis, occupies near three hundred acres, and has a large portion under tillage, and uses the same methods invariably, as Mr. Lenahan, above described.

Mr. Segrave, of Newbarne, occupies four hundred acres, and has a great quantity under tillage; his system is, fallow universally for wheat, except two or three acres of potatoe ground, and follows afterwards the same system invariably, as before described.

Mr. Segrave disapproves of sowing wheat on a clover lea, with one ploughing. I shall only observe, this practice has stood the test of fifty years, and thousands, who have tried it in England and Ireland, have proved its consequence, and continue the same course.

They vary the crops abovementioned, sometimes having wheat twice running, and sometimes sow barley instead of oats. But exhausting crops for ever succeed each other, without the least intervening relief of a meliorating one. The meliorating crops are principally of the leguminous and tap-rooted kinds, such as potatoes, beans, peas, vetches, turnips, lucerne, saintfoin, clover, and all the cabbage tribe. Those of the tap-rooted kind,

are parsnips and carrots. The exhausting crops are wheat, barley, rye, oats, and rye-grass, which are fibrous rooted, mat close, and render the soil impervious to the atmosphere. A meliorating crop interpolated to an exhausting one, would effectually answer the purpose of the fallow, particularly if they were converted into hoeing or drill crops, such as beans, peas, vetches, and potatoes ought to be, and as turnips, parsnips and carrots might be. But if rape, turnips, vetches, or any of the cabbage tribe be raised for winter crops, for stall feeding, the *whole* so raised will be *additional food and profit* to the farmer, not only by the additional cattle it will fatten, but by the quantity of dung he would be able to amass in a farm yard. I would on these principles recommend the following improved course, as the most beneficial that could be pursued in this county.

No. of Years.	Summer.	Winter.	No. of Crops.
1st year	Potatoes	Rape	2
2d year	{ Barley, oats, or flax; with clover }	Clover	1
3d year		Wheat	1
4th year	Wheat	Rape	2
4 years	Total Crops		6

Thus, suppose a field under potatoes the first crop, I would advise they should be planted in drills; the difference between beds and drills is of material consequence; the expences and produce on each crop will amount

amount to a large sum in favour of the latter, which the estimates will shew hereafter. Whatever previous crop has been in the ground, it must be well ploughed and mellowed against the planting potatoes, laid level, and then proceed to get out dung from the farm yard, in straight rows, at the distance of twenty yards from row to row, and the loads in the rows at sufficient intervals, to give about an hundred and ten car loads (each load a cubic yard) to the acre; they should be planted in the beginning of March, in order to be taken out in September. Having the potatoes ready, there must be about twelve women or boys with baskets, six to carry dung, and six to plant the sets; these dungers and planters must be all stationed at proper distances, and no two suffered to come together; being thus prepared, the plough commences with a furrow within ten yards of each side of the first row of dung; at the second round of the plough the dung baskets follow, shaking it into the furrow, and the planters immediately follow them with the seed, and plant at nearly eight inches distance; the next bout of the plough covers this, and the same process must follow in every third furrow until the whole is finished; by this means the rows will be from two feet to two feet three inches asunder. It will be necessary to have two * proper overseers, one *near* each end, to superintend the dunging and planting, that it may be done correctly. These two men, with the twelve

c 2

dungers

* If the ground to be planted be long, three overseers may be necessary.

dungers and planters, and two at the plough, if at work in the morning in proper time, and kept at it through the day, may plant an Irish acre. When this is done, it must be harrowed with a light harrow to close and level it. When the plants appear, they may be harrowed again with a common harrow drawn in a retrograde direction, and when all up, horse-hoed with a double mould board drill plough, up and down the intervals, for the purpose of giving them fresh earth as the plants advance in growth. This drill plough must be so constructed, as to open out the mould boards by a screw, from three to twelve inches, to split the intervals between the rows, and raise earth on both sides to the drills, to be repeated occasionally as the crop advances.* When the crop is fit to take out, the best method is to begin with a plough at one end and plough *across* the drills; ten or twelve women or children must follow the plough, each having a proper range and marks to pick in; if they are suffered to get together, there will be nothing but confusion and loss of time. Two or three carts or cars must be fixed at intervals to empty their baskets, as they are filled; when all ploughed, it must be

* The latter end of June, while the potatoes are growing, sow a quantity of rape seed, proportioned to the ground under potatoes; it will be proper to sow four pounds of seed for every acre to be planted, each pound will take two square perch of ground. It will be necessary to transplant half these plants at least, if not all, into a nursery within about three inches of each other, as soon as of a proper growth, in order to prevent their drawing one another, and thereby rendering them so weak as never after to arrive at a good growth, even in the best soil.

be well harrowed, and a second ploughing and harrowing will effectually take out the whole crop, leaving the ground in a high state of cultivation for the succeeding crop, and the potatoes thus taken out will be infinitely less damaged or cut, than if taken out by the spade; they will not be so liable to be pilfered, as when kept so long in hand, as digging would occasion; and finally, they will be taken out *cleaner* and *cheaper*.

As soon as these operations are got over, and the potatoes removed from the field, which we may hope to have done against the beginning or middle of September, it must be *immediately* planted with the rape plants, at about six or eight inches distance from plant to plant. This business can be well performed for about thirty shillings or a guinea and a half an acre, and should be completed as much before Michaelmas as possible; the sooner the better, as there is not one day to be lost in getting in this crop. This will produce, if every thing has been done properly, a most luxuriant crop for bullocks, cows, or sheep, in February and March, a very salutary time of the year, when no other green food is to be got, but such as is thus raised.

Barley, oats, or flax, with clover, should follow the rape, but not to sow the clover, until the corn or flax is three or four inches above ground, and then about twenty or twenty-one pounds of the biennial red clover (*trifolium pratense*) per acre, and immediately roll it. I recommend the sowing the clover at this period, because it might injure the corn or flax, if it was to grow

too luxuriant before the other had some advantage; and also, if too great a quantity of clover was to grow up through it against the harvest, it would be difficult to save the corn, if wet weather should prevail at that time. Another reason also for not sowing the clover with the corn, is a more favourable time for this feed, it being rather tender, and apt to burst, if wet and cold weather should come on before it buds.

The next year, the first crop of clover will be fit to mow in the beginning of June. If it was practicable to give it a top-dressing of marle immediately after cutting the corn, or if in the spring, any other manure, it would be highly advantageous. The second crop, which must (or should) be for feed, or part of it at least, is a very material one, and will most amply pay, if well conducted. This will be probably fit to cut the latter end of August; it may be made up by itself, and, in the course of the winter, as occasion serves, thresh off the seed-pods from the stalks, and, as there is an almost impossibility of threshing this clean, so as to get out all the seed, it will be necessary to have the seed-pods (after being disengaged from the stalk by the flail) shelled or rubbed out by a mill; this is an operation well known in clover countries, and is expeditiously performed. I imagine a threshing machine may perform it perfectly well, but I never have been able to ascertain the fact, as they are only beginning to get into use. I hope some of those, who have machines, will try the experiment.

Wheat must follow the clover with one good ploughing, and be harrowed in; this must be done with all possible

sible expedition, after cutting and clearing off the clover as early as may be in September. Wheat-seed is commonly sown too late; were it sown the middle of September, which is the prime time, less seed would serve, and the crop be more abundant, and what is of some consequence earlier, a little earth may be shovelled from the furrows over the ridge; by this means there will be in all probability a good luxuriant crop. And if from a wet winter the ground should be scaly in the spring, which it generally is, run a light harrow over the whole crop; this may surprise a person unacquainted with the practice, imagining it might tear up the roots, but it will not remove one in twenty, and a little experience would soon convince him of the utility. A few years back I had a crop of clover wheat, put into the ground with every apparent requisite for a good crop; nevertheless, from the wetness of the winter, it looked so poor in the spring, that I was advised to plough it up, and sow barley; it was a forlorn hope, and I harrowed it all over with a light harrow; this operation was performed in the beginning of March, when the ground was tolerably dry: I observed a very visible change in one week, and, in a fortnight, it obtained a most beautiful verdure, and spread fast at the roots, forming immense numbers of shoots or branches from the main root; to encourage this, I rolled it; the crop improved daily, with the most flattering prospect of success, and finally produced such a crop, as gained me a premium from eighteen competitors. Being so far successful, I afterwards occasionally followed the practice, with all imaginable advantage, and

can

can recommend it to the most timid, as a beneficial method of encreasing a crop of corn to the utmost that the land is able to produce.

In the beginning of June remember to sow rape-feed, for to raise winter plants to succeed the wheat as soon as cut.

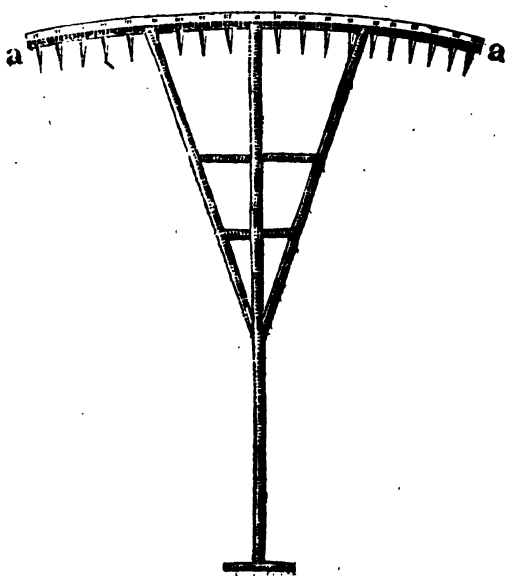
When the wheat is harvested, let the stubble be raked immediately across the ridges, with a drag-rake of the following description and form.

Head, *a, a*, four feet and a half.

Teeth, three inches distance.

—, three inches clear of the wood.

Handle, about five feet long, with a cross-stick at the end.



This

This can be easily drawn by a boy of fourteen or sixteen years of age, and he will be able to gather a great quantity of heavy ears, that fall from, or escape the binders. Provided this work is done carefully, no man's labour can be employed to better advantage, probably to the gaining of a barrel of wheat by one day's work, according to the neatness of the binding.

As soon as the wheat is cut, the ground must be, without loss of time, dunged, ploughed, and planted with the rape plants, as directed after potatoes; and the next year, will begin the course again, and each succeeding year, must be conducted upon the like scientific principles, and, by adhering to the meliorating crops, the ground will be in a progressive state of improvement.

Thus I have conducted the farmer through six valuable crops in four years, without any loss by fallow. I will now contrast the present mode of farming from estimates, that I have been favoured with in my tour through the county, with the above proposed mode, of interposing valuable, meliorating, and improving crops, to which also, I must add, our climate is peculiarly adapted.

Estimate

*Estimate of tilling one acre, by a county Dublin farmer,
according to the present customary mode.*

First year, FALLOW.

Three ploughings, harrowing and sowing, 1 10 0

Second year. £. s. d.

Wheat-seed, 16 stone, at 1*l.* 10*s.* per barrel, 1 4 0

Shovelling, - 0 5 0

Tythe, - 0 6 0

Two years rent, 2*l.* per year, - 4 0 0

Reaping, binding, and drawing home, - 0 13 0

Threshing seven barrels (supposed produce), 0 7 0

Winnowing ditto, - 0 1 2

Drawing to market, - 0 6 6

Commission, 3*d.* per barrel, - 0 1 9

Custom, - 0 0 2

Drawing eight load of straw to market, 0 16 0

Commission on ditto, - 0 2 0

Expense, £.9 12 7

Produce, 7 barrels of wheat, at 30*s.* per bar. 10 10 0

Eight load of straw, at 7*s.* - 2 16 0

£.13 6 0

Expense, 9 12 7

Profit, £.3 13 5

Third

Third year (second crop). Oats.

	£.	s.	d.
Ploughing, harrowing, and sowing, -	0	18	0
Seed, two barrels and a half, at 12s. per bar.*	1	10	0
Tythe, - - -	0	4	4
Reaping, binding, and carrying home, -	0	13	0
Threshing ten barrels (supposed produce†),	0	4	2
Winnowing ditto, - - -	0	1	3
Drawing to market, - - -	0	6	6
Commission, 3d. per barrel, - - -	0	2	6
Custom, - - -	0	0	2½
Drawing five load of straw to market,	0	10	10
Commission, - - -	0	1	3
Custom, - - -	0	0	4
One year's rent, - - -	2	0	0
	<hr/>		
Expense,	£.6	12	4½
	<hr/>		
Produce, ten barrels, 12s. per barrel,	6	0	0
Five load of straw, 7s. - - -	1	15	0
	<hr/>		
	£.7	15	0
Expense,	6	12	4½
	<hr/>		
Profit,	£.1	2	7½

* A great deal too much. J. A.

† A bad return for so much feed.

Fourth

Fourth year (third crop). Barley.

	£.	s.	d.
Three ploughings, harrowing, and sowing,	1	10	0
Seed, fourteen stone (16s. per barrel),	0	14	0
Tythe, - - -	0	5	0
Reaping, binding, and drawing home, -	0	13	0
Threshing nine barrels (supposed produce),	0	6	0
Winnowing ditto, - - -	0	1	6
Drawing to market, - - -	0	8	0
Commission, 3d. per barrel, - - -	0	3	0
Custom, 3d. - - -	0	0	3
Drawing 6 loads of straw to market,	0	13	4
Commission and custom on the straw, -	0	2	6
One year's rent, - - -	2	0	0
Clover-feed sown with the crop, eighteen pound, 1s. 3d. per pound, -	1	2	6
Sowing and rolling, - - -	0	5	0
Expense,	£.8	4	1
Produce, nine barrels, 16s. per barrel, -	7	4	0
Six load of straw, 6s. per load, -	1	16	0
	£.9	0	0
Expense,	8	4	1
Profit,	£.0	15	11

The

The four years profit collected.

				£.	s.	d.
Wheat,	-	-	-	3	13	5
Oats,	-	-	-	1	2	7
Barley,	-	-	-	0	15	11

£. 5 11 11

Average, 11. 8s. per acre per annum.

*Estimate of the improved course.**First year (summer crop). Potatoes in drills.*

				£.	s.	d.
Suppose this to be a worn out stubble. To						
begin the course, harrow it well, and						
give it two good ploughings and harrow-						
ings before getting out the dung,	-			1	5	0
110 cubic yards, or car-loads, of dung, in						
rows, as before-mentioned,	-			5	10	0
15 cwt. of seed, at 5s. per cwt.	-			3	15	0
Cutting,	-			0	3	9
Plough a day,	-			0	6	0
Twelve women and children, for dunging						
and planting, per day,	-			0	8	0
Two overseers,	-			0	3	3
Harrow to level the whole,	-			0	2	0

£. 11 13 0
Brought

STATISTICAL SURVEY

	£.	s.	d.
Brought forward,	11	13	0
Horse and hand-hoeing at sundries, -	0	15	0
Ploughing out, as before directed, and drawing home, -	2	0	0
Half year's rent, -	1	0	0
	<hr/>		
Expenses, £.	15	8	0
	<hr/>		
Produce 120 barrels, of twenty stone each,			
12s. 6d. per barrel, -	75	0	0
	<hr/>		
Expenses, £.	15	8	0
	<hr/>		
Profit, £.	59	12	0

The foregoing method of drill-planting takes less dung, less seed, is less expensive in planting and taking out, and will finally produce a larger crop, than those planted in beds, with about half the expense, and after all, the ground will be cleaner, and in better condition, than it could be in beds; it is also an excellent preparation for a green winter crop, to be succeeded by flax and clover.

First year (winter crop). Rapt.

	£.	s.	d.
Seed-bed, digging and sowing, -	0	6	0
One ploughing and harrowing, -	0	6	6
Planting at six or eight inches distance, -	1	14	0
	<hr/>		
	£.	2	6
	<hr/>		
Brought			

OF THE COUNTY OF DUBLIN. 31

	£.	s.	d.
Brought forward,	2	6	6
Cutting and carrying to the cattle,	-	1	0
Half a year's rent,	-	1	0
Expense,	£.4	6	6
Produce twenty ton,* 10s. per ton,	-	10	0
Expenses,	4	6	6
Profit,	£.5	13	6

Second year (summer crop). Barley with Clover.

	£.	s.	d.
Ploughing, harrowing, and sowing,	-	0	8
Seed barley, 16 stone, at 16s. per barrel,	0	16	0
Seed clover 20lb. at 1s. 3d. per lb.	-	1	5
Tythe,	-	0	6
Reaping, binding, and carrying home,	-	0	13
Threshing sixteen barrels, 8d. per barrel,	0	10	8
Winnowing ditto,	-	0	2
Drawing to market,	-	0	10
Commission,	-	0	3
Custom,	-	0	0
Drawing ten load of straw to market,	1	0	0
Commission on ditto,	-	0	2
	£.5	17	0

* Very low estimate.

	£.	s.	d.
Brought forward,	5	17	0
Custom, ditto, - - -	0	0	6
Half year's rent, - - -	1	0	0

☞ The clover in the winter half year is well worth the other half year's rent.

Expenses,	£.6	17	6
Produce sixteen barrels, 16s. per barrel,	12	16	0
Ten load of straw, 6s. per load, -	3	0	0
	£.15	16	0
Expense, 6 17 6	6	17	6
Profit, £.8 18 6	£.8	18	6

Third year (summer crop). Clover.

	£.	s.	d.
Picking off stones, and rolling, - - -	0	4	0
Mowing and making hay, - - -	0	16	6
Drawing home, - - -	0	8	0
Stacking, - - -	0	3	0
Tythe, - - -	0	5	0
Loading eighteen load, $4\frac{1}{4}$ cwt. each, and drawing to market, - - -	1	19	0
Commission, - - -	0	4	6
Custom, - - -	0	0	8
Half year's rent, - - -	1	0	0
Expenses, £.5 0 8	£.5	0	8
Produce			

OF THE COUNTY OF DUBLIN. 33

	£.	s.	d.
Produce* of first crop, 18 load, 12s. per load,	10	16	0
Expense,	5	0	8
	<hr/>		
Profit,	£.5	15	4

Third year, second crop (same summer). Clover.

	£.	s.	d.
Mowing, making, drawing, and stacking,	1	7	6
Threshing, and shelling at the mill, -	1	10	0
Winnowing and marketing, -	0	4	0
Half year's rent, -	1	0	0
	<hr/>		
Expense,	£.4	1	6
	<hr/>		
Produce 200 lb. of feed, 1s. 3d. per lb.	12	10	0
Ten load of threshed hay, 6s. per load,	3	0	0
	<hr/>		
	£.15	10	0
Expense,	4	1	6
	<hr/>		
Profit,	£.11	8	6

* The clover can be consumed to great advantage in the house in its green state.

Third

*Third year (winter crop), wheat; and fourth year,
(summer crop) ditto.*

	£.	s.	d.
One ploughing, harrowing, and sowing,	0	12	0
Seed*, thirteen stone,	0	19	6
Shovelling the furrows,	0	5	0
Tythe,	0	6	0
Half year's rent; the other half year is charged to the second crop of clover last summer,	1	0	0
Reaping, binding, and drawing home,	0	13	0
Threshing fourteen barrels,	0	14	0
Winnowing and drawing to market,	0	13	2
Commission,	0	2	4
Custom,	0	0	4
Drawing fourteen load of straw to market,	1	8	0
Commission and custom on ditto,	0	3	6
Expense,	£.6	16	10
Produce, fourteen barrels, 1 <i>l.</i> 10 <i>s.</i> per barrel,	21	0	0
Fourteen loads of straw, 7 <i>s.</i> per load,	4	18	0
	£.25	18	0
Expense,	6	16	10
Profit,	£.19	1	2

Fourth

* If sowed early, less seed.

Fourth year (winter crop), Rape.

Dunging this crop is absolutely necessary, and it may be well presumed, that the preceding crops have afforded an ample supply of this article.

	£.	s.	d.
Drawing 150 load of dung, each a cubic			
yard, 3d. per load, - - -	1	17	6
Seed, ploughing, planting, &c. as before, - - -	3	6	0
Half year's rent, - - - - -	1	0	0
	<hr/>		
Expense, £.	6	3	6
	<hr/>		
Produce twenty * ton, 10s. per ton, - - -	10	0	0
	<hr/>		
Expense, - - - - -	6	3	6
	<hr/>		
Profit, £.	3	13	6

The four years profit of the improved course collected.

	£.	s.	d.
Potatoes in drills, - - -	59	12	0
Rape, - - - - -	5	13	6
Barley, - - - - -	8	18	6
Clover, two crops, - - -	17	3	10
Wheat, - - - - -	19	1	2
Rape, - - - - -	3	16	6
	<hr/>		
	£.	114	5 6

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The

* Considering the order the ground is now in, it may more probably produce thirty ton.

The old method, pursued in this county, appears by contrasting these estimates to be erroneous ; there should be better crops, and more of them in number in the same space of time. The proposed system strikes particularly at the ruinous plan of *fallowing*, and also, leaving the *ground idle* in the winter, at a time that the *most valuable crops* may be produced for feeding cattle. Facts speak for themselves ; it is not only producing *six crops* in *four years*, but the *dunghill* is more than *doubled*, and, what is of still *more consequence*, the land, by this management, is also in a progressive state of *improvement*, and kept *clean from weeds*, which, when uncultivated, would equally exhaust the soil with a beneficial crop.

The following undeviating maxims should be strictly attended to in tillage. *That a meliorating crop should for ever succeed an exhausting one. No fallows*, nor any necessity for them, as the ground will be in better order without them, by introducing *meliorating crops*. The *obvious utility* of augmenting the WINTER FOOD for cattle, at a time that THE BREED IS SO RAPIDLY IMPROVING, and keeping the land perpetually under *thick smothering crops*, are such indisputable proofs of good management, that more need not be said upon the occasion.

SECT. 4. *Use of Oxen—how harnessed.*

MANY of the best farmers work oxen tolerably well appointed, in traces, with a collar, &c. Some work them with neck-yoke and bows. Counsellor O'Farrel, at Mervil, near Stillorgan, uses them upon an extensive scale, on a demesne of 150 acres; all his tillage is performed by oxen, four to a plough, and he has several cars constantly at work, drawing stones, manure, &c. with an ox to each: he also makes his drains by means of oxen, ploughing and shovelling alternately, till they are at their proper depth. They are well adapted to all solid, heavy draughts, and are generally reckoned to fatten better after *moderate* labour for a year or two; they should be fed in proportion to their work, and never suffered to *lower* in flesh. The favourable circumstances attending the working of oxen are, that they are cheaper fed than horses, in the proportion, as nearly as I could ever observe, of about three to two. If any accident should befall any of their limbs, that might be irretrievable, or render them useless for labour; a horse, in such an event, would answer no purpose, but an ox, with the like mischance, may be stall-fed.

The premiums offered by the Farming Society for ploughing with oxen, can scarcely fail of having the wished for effect. A bit in their mouth, the same as a horse's, would make them more manageable, and the ploughman

ploughman can then with long reins guide them as he pleases. This business, when well practised, will soon be adopted, from the advantages that will accrue; Counsellor O'Farrel has tried it with success.

SECT. 5. *Nature, and use of implements of husbandry.*

THE county of Dublin cannot boast of much variety in this way; their husbandry is confined to the most common implements, excepting with a few noblemen or gentlemen of fortune.

There are such a variety of ploughs in use, that there are no two counties but what vary, in some degree, in their construction. In most instances, the common plough in this county is but badly adapted to the general soil or situation of the land, and is at best a heavy draught. The *twisted* mould-boards of the English ploughs are excellent for imitation; they subvert the furrow far better than any other in use, and they are withal lighter and more convenient. The Rotheram plough appears to me the best for every purpose.

The trenching plough, where the soil is deep enough, and particularly where tap-rooted plants are to be raised, is an instrument, that cannot well be dispensed with. The profit of thus raising fresh soil, when it can be had proper for vegetation, and that the surface has been rendered in any degree effete, will be amply recompensed by the additional fertility, that it will produce by this operation,

operation, not to say the necessity there is for it, in a tap-rooted crop, which the land is not fit for, if the understratum or subsurface is sterile or uncultivated.

There is an instrument for drilling wheat, barley, peas, or beans, &c. invented by the ingenious Mr. Duckett, which, as an article of economy, is worth attending to, and as a means of producing clean and fertile crops, and leaving the ground in high order, is worthy of imitation. He drills and horse-hoes all his crops, by striking furrows or ribbing his ground at every nine inches, in this form;



he then sows broadcast (but not quite so much seed as in the common method) over these furrows, and a light pair of harrows, which work upon a kind of hinges in the middle, follows in the same direction as the drills, levels the surface, strikes the seed into the furrows, and covers it with the greatest accuracy. Harsh and stubborn soils are inapplicable to this management, as the instruments employed would be liable to be thrown out of their work, and the rows must be perfectly straight and regular; the least variation would spoil the hoeing, leave it liable to be cut up, or leave spaces unhoed, hence the mutual dependance of one instrument upon another. Mr. Duckett forms his ridges for this husbandry about seven or eight feet wide, so as to take ten drills,

drills, which his instrument composed of so many shares performs at one operation, and the hoeing in like manner.

To a person unacquainted with the practice, it might be hazardous to attempt it on so large a scale; but a simple instrument may be formed by any ingenious workman, that might strike five rows at each bout, in the form described, and the same frame be adjusted afterwards to hoeing also, by only shifting the operating part, that formed the drills, to five hoes adapted to the business.

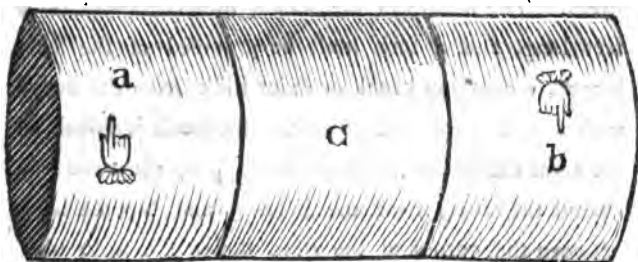
But this kind of drilling can be performed in a still simpler stile, though not so profitably, nor with so much dispatch. A common plough, held obliquely to an angle of forty-five degrees, by an expert ploughman, will score out the drills with sufficient accuracy, and they may be afterwards horse-hoed with a double hoe, or even hand-hoed.

I shall only observe, that I have practised this method of Mr. Duckett's with success; I sowed about eight or nine stone of wheat to an Irish acre, and other grain in proportion, and I have had respectable crops, superior to the common broad cast.

Besides the large single harrow in use in the county of Dublin, farmers should be provided with a *pair* of light harrows to move upon the hook-hinges in the middle; they would be more advantageous for finishing and fining the ground, and would also be useful for harrowing over corn in the spring. They should be narrower at the draught.

draught end, than at the tail, and they should be drawn obliquely from the corner.

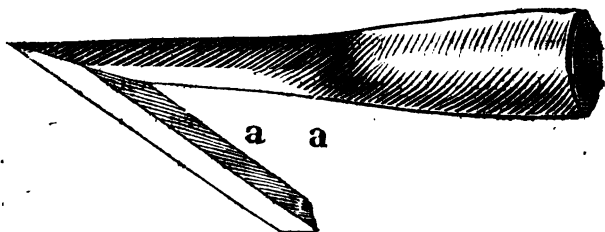
A roller is a useful instrument, when well constructed. The single block of wood, of which it is generally made in this county, is not calculated for doing good work ; it may answer for rolling meadows, but when rolling corn (which is too much neglected) and turning at the ends, it will tear and twist the roots out of the ground. This mischief is obviated by the jointed roller, in three divisions, with an iron axletree for each joint to turn upon. It is evident that when the roller is turning round, *a*, turns as the index points, and *b*, will turn in the contrary direction, and *c*, by turning in a short space does no considerable damage.



The joints must be made very exact and close, a good iron hoop at each juncture, and an iron axletree through the roller for the divisions to turn freely upon.

A weeding hook, for cutting weeds out of corn, comes aptly under the head of implements ; the plan I here subjoin is the best I have ever met, and what I adopted

adopted for many years in preference to any I had seen. Mr. Wilson, the iron-monger, in High-street, has them for sale, made from a pattern I furnished.



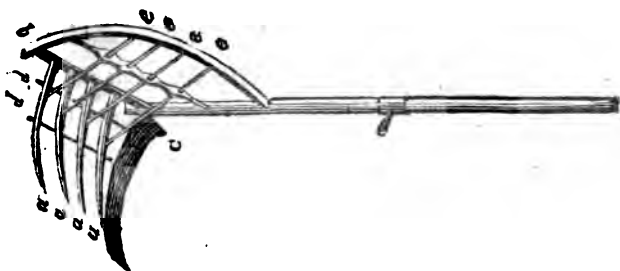
They should be steeled on the inside *a, a*, and from the socket to the point should rise with a gradual curve, so as nearly to form an obtuse angle of about 140 degrees. The handle in the socket must be about three feet long, and a fork must be provided of the same length, a common hazel or osier stick from the hedge with a fork at the end. In using the hook it is held in the right hand, and the fork in the left, place the fork against the weed, near the bottom, and slip the hook between the corn and the weed under the fork, until you get a hold of the weed, and give it a smart pull to you; when a person has used it for a few minutes he will be perfectly familiarized to it, and able to go through more work, than he could perform in the common methods, and with greater ease. Women can perform this work as well as men, who may be put to more

more laborious employments better adapted to them. I need not expatiate largely upon the utility and profit of eradicating as much as possible every noxious weed from a farm, particularly from corn. In the same proportion as weeds prevail the corn is injured, and *particular attention* should be paid to *doing it in time*, before the weeds exhaust the soil and injure the crop. Spare no expense to keep crops clean, weed the meadows when half grown, and even the hedges, or the weeds will communicate to the fields and dunghills, and increase a hundred fold, occupying the place of profitable crops.

Mowing corn with a cradle fixed to a scythe, as practised in most parts of England, is so beneficial a custom that it cannot be too strongly recommended; the only difficulty is getting over a professional man to teach others here, and this cannot be attended with great difficulty; the advantages attending this mode of management are particularly conspicuous in a wet season, as by this means, at favourable opportunities, the harvest is dispatched with alacrity. Farmers here may be prejudiced against this method, from a slovenly one that is sometimes attempted, without either the proper instrument or abilities for performing the operation. This, no doubt, would give a wretched idea of the business, but let not *prejudice* bias any person, I adopted the practice for above twenty years with profit and success, and; were I farming again, *nothing should prevent* my pursuing the same course. An expert mower will
cut

cut as clean as any reap-hook, and lay the butt of the ledge as *even as a line*, and withal do as much work as six men. The greatest art in this business, is the fixing the apparatus to do clean work, and keeping it in order.

This object accomplished, almost any mower, with a very little instruction, can perform the operation, by only observing the second motion after each stroke of the scythe, viz. of pitching the corn neatly off: *a, a, a, a*, are the four fingers fixed over the back of the scythe; *b*, is the standard to be fixed in the handle of the scythe at *c*,—*d, d*, is a tough hazel twig run through the fingers, to open or close them at pleasure; *e, e, e, e*, are also twigs to draw the fingers in or out occasionally to their proper places.



Threshing machines are getting into use fast, and are of very material advantage; they thresh out every grain, which is never effected by the flail; this saves pilfering, by not being kept too long under the hands of workmen; it finishes it off, by means of a winnowing machine attached to the other apparatus, fit for market.

One

One of them can be completely set to work, either by water or horses, for sixty pounds.

SECT. 6. *Markets for grain.*

DUBLIN is the great and only market for selling grain in this county, every Wednesday and Friday, in Thomas-street, and is under the controul of the Lord Mayor, whence is regulated the price or weight of bread, weekly, for the city and county, as will be shewn in the thirty-first section of general subjects, on weights and measures.

SECT. 7. *Use of green food in winter.*

BUT little green food has been hitherto raised in this county for feeding stock; they are, however, coming gradually into that beneficial practice. If farmers were to raise green food for the support of stock in the winter, it would tend to the following advantages :

1st. The ground would improve more by the introduction of meliorating crops.

2d. The breed of cattle would be materially promoted by the use of green food at that season of the year

year, when, otherwise, dry fodder only could be procured.

3d. The dung-heap would be materially increased.

4th. The great *additional* profit, that would accrue to the cultivator from ground, that was formerly waste at that time of the year.

I have already mentioned, that the Right Hon. D. Latouche raises borecole, between his potatoe drills, for winter food.

George Grierfon, Esq. also raises turnips and other green food, for stall-feeding.

No person in this county has hitherto introduced green crops, as a system of rural economy, *so far as to* bring them on *constantly*, in regular succession, through the year, as meliorating crops between exhausting ones. But it is probable, that it will not be long before we shall see this great improvement take place, and green crops for feeding cattle be as common as corn is now, so as to furnish green food for stock, not only for the winter, but for the whole year round.

CHAPTER III.

PASTURE.

SECTION I.

Nature of it.

THE pasture ground of the county of Dublin is, with a few exceptions, of a cold nature, and produces very indifferent feeding in that state; and, if it had not the advantages of the capital, that produces such quantities of dung to improve it, would be in a state of great poverty. The mountains are bleak, uncultivated, and in many parts barren; in other parts they afford a short pasture, not any way luxuriant, but suitable to small sheep or small cattle; vegetation, there, goes on slowly, and is late in the spring before it makes any progress. I have been informed, that any improvements, in those parts, would be useless; I think differently, but the proprietors are afraid to plant them, which the greatest part of them would well answer for; they say, trees would be destroyed, and other crops would be pilfered: a better way of acting will probably now pervade the
lower

lower class, as I know, improvements have in many places escaped those depredations so much apprehended. They are now set out in large lots, to poor people, for a very trifling rent, not perhaps amounting to one shilling an acre. If improved, they might be worth fifteen shillings, or even twenty shillings; undoubtedly, some method ought to be tried to improve pasture so near the capital; it abounds, in many parts of it, with materials for the purpose, marle, peat, water, &c.

From Howth, along the sea coast, north, there are some good salt marshes, and the pasture is of a tolerable feeding quality; more inland, it alters in some degree. Those, that have drained and improved their pastures, have experienced a very material alteration, those parts producing an earlier growth of grass, and in greater abundance. Hence the necessity of draining and manuring. Pasturage, in the vicinity of the city, is more profitably followed than tillage, on account of the demand for grass for dairy cows, and the multitude of horses for the use of the capital. Another consideration is of importance, viz. the immense quantities of hay required for these cattle, which is supplied from within a circuit of four miles round, which extent has been improved equal to its consequence, and is therefore highly prolific, and fully equal to pasture two cows on an acre, for the summer season; but were it cut green, to foil cattle with in the house, during that time, three acres would yield as much food as four or five; cows would

would give more milk, and young cattle would improve in their growth.

The pasturage of the remoter parts of the county might be improved in a number of places, where marle, lime, and peat, is to be obtained, together with water for irrigation, where practicable.

Between Howth and Balbriggan, the sandy tract should be converted to the growth of carrots, parsnips, turnips, potatoes, &c.

SECT. 2. *Breed of cattle—how far improved.*

THE best informed butchers say, that the large cattle are improving to their purpose; but the dairymen say, that in proportion as they are improved for the butchers, they diminish in profit for the dairy, it being clearly ascertained, that the best milch cows are the worst for fattening until turned dry.

It is a point much controverted at present, what breed of cattle are the best; but as each distinct kind is now in possession of different gentlemen, this point will be clearly ascertained in a few years.

Right Hon. D. Latouche, at Marley, has the Holdernefs.

Sir William Gleadowe Newcomen, the long horned Leicefter.*

R

George

* At Carrickglafs, in the county of Longford, this gentleman has the short horned or Holdernefs breed, highly improved on the Teefewater.

George Grierfon, Esq. the same.

Robert Wynne, Esq. Clonfilla, the same.

A competition has been excited by some of the members of the Farming Society, highly honourable to the parties, of producing the best bull and heifer calf on the 18th day of April, 1802.

Robert Wynne, Esq.

Richard Reynell, Esq.

C. P. Doyne, Esq.

Luke White, Esq.

John and Henry Garnet, Esqrs.

These gentlemen entered into a subscription, of five guineas each, for the above purpose; such a spirit of emulation must soon produce the best effects.

SECT. 3. *How far capable of further improvement.*

It is the opinion of the most intelligent of our breeders, that the cattle in Ireland are in such a progressive state of improvement, that in a few years the English themselves will be outdone, and will finally resort to us to improve their breed, the Irish soil and climate being more favourable to stock.

The measures adopted by the Farming Society of Ireland, have already effected a considerable improvement, which, no doubt, will rapidly advance under their protection, and by means of their unceasing exertions.

The

The stock farmer should, however, be reminded, that to answer his intention the more ~~effectually~~, in improving his breed, the most succulent plants, that can be raised, are what will only answer his purpose. Rye grass (*Gramen loliaceum*) of all others, is the most remote from this description, if we except very elevated situations, and one fortnight of its first growth, in the spring; the remainder of the year it is little better than straw, except by keeping it eaten down too bare for the proper support of improving stock. Watered grounds will produce full as early a growth as the rye grass; to this I may add clover (*trifolium pratense*) as early as any, more productive, and highly succulent. These would meliorate the soil, but the former exhausts it. If to judicious summer management were added winter green food, it would effect more for improving stock, than any other means that could be devised.

SECT. 4. *Markets or Fairs for them.*

SMITHFIELD market is held twice a week, viz. every Monday and Thursday through the year, for cattle, sheep, and pigs, at which times the butchers supply themselves with fatlings of every kind, for the meat markets, and the dairymen and others buy milch cows. The following table shews the fairs held within the county Dublin in the year, with the purposes, for which they are held.

LIST OF FAIRS

IN THE

COUNTY OF DUBLIN.

<i>Place held.</i>	<i>Time.</i>	<i>For what purpose.</i>
Tallagh,	1st Tuesday in March,	Cattle and hardware.
Luttrellstown,	28th March,	Horses and pedlary.
Carrickmines, 2 days,	14th April,	
Skerries,	28th ditto,	
Rush,	1st May,	Horses and pedlary.
Garristown,	5th ditto,	
Lusk,	5th ditto,	Horses and pedlary.
Balruddery,	6th ditto,	Horses, cattle, & pedlary
Newcastle,	9th ditto,	Cattle and Pedlary.
Swords,	12th ditto,	Horses and pedlary.
Kilsalaghan,	Ascension Thursday,	Horses and pedlary.
Fieldstown,	Whitsun Monday,	
Saggard,	{ 1st Thursday after } Trinity Sunday, }	Cattle and pedlary.
Tallagh,	7th July,	Cattle and pedlary.
Rathfarnam,	10th ditto,	Cattle and pedlary.
Lusk,	14th ditto,	Horses and pedlary.
St. Margaret's,	30th July,	Horses, cattle, & pedlary
Skerries,	10th August,	
Balruddery,	12th ditto,	Cattle and pedlary.
Garristown,	15th ditto,	
Palmerstown,	21st ditto,	Horses and pedlary.
Ballimore,	26th ditto,	
Donnybrook,	26th ditto,	Horses and pedlary.
Luttrellstown,	4th September,	Horses and pedlary.
Kilsalaghan,	8th ditto,	Horses and pedlary.
Tallagh,	16th ditto,	Cattle and pedlary.
Balbriggan,	29th ditto,	
Rush,	29th ditto,	Horses and pedlary.
Newcastle,	8th October,	Cattle and pedlary.
Ramichael,	10th ditto,	Horses, cattle, & frize.
Saggard,	10th ditto,	Cattle and pedlary.
Carrickmines, 2 days,	14th ditto,	
Ballimore,	29th ditto,	
Garristown,	1st November,	
Saggard,	8th ditto,	Cattle and pedlary.
Tallagh,	9th ditto,	Cattle and pedlary.
Lusk,	25th ditto,	Horses and pedlary.

SECT. 5. *General Prices.*

THE prices are so various and fluctuating at different seasons of the year, that it is difficult to state what they are even at a certain period, as their prices depend upon their fatness and quality. In April an ox of seven hundred weight, prime beef, sold generally for about 28*l*.

Sheep, same time, 24 lb. a quarter, about 4*l*.

In August, an ox of seven hundred weight, prime beef, sold for about twenty guineas.

Sheep, same time, of 24 lb. a quarter, about three guineas.

SECT. 6. *Modes of feeding—how far housed in winter!*

THE general mode of feeding cattle through the county, is to pasture them during the summer, and, in the winter, to feed them in the house with hay; some give corn at intervals with the hay, and some are now getting into the practice of raising turnips, rape, &c. for feeding in the winter; a beneficial mode, well worthy of being vigorously pursued. George Grierson, Esq. is this year raising twelve acres of turnips, to be entirely appropriated

ated to the feeding of oxen in the winter*. It would be endless to enumerate the advantages attending the raising of winter green food for stall-feeding, instead of keeping the ground idle and bare in that season of the year. There are many gentlemen, who seem now well convinced of this fact, that, besides all other favourable circumstances, the ground improves by being under meliorating crops. Other considerations have their weight also, and numbers are now preparing to follow a system, that, above all things, will so materially conduce to the *improvement* of the breed of cattle.

The shifting of cattle in rotation from one enclosure to another, contributes to their feeding, and is generally practised.

* Right Hon. David Latouche has all his drill potatoes planted in the intervals with borecole, for stall-feeding in the winter.

Counsellor O'Farrel, at Merville, has ten acres of rape, which he proposes for stall-feeding, and for sheep in the spring.

John Claudius Beresford, Esq. of Belcamp, has about three acres of rape for stall-feeding in the winter.

Richard Sayers, Esq. of Greenwood, has near two acres of rape for the same purpose.

SECT. 7. *Natural Grasses.*

THE fields, that have been improved, produce very good natural grasses, but they abound with such a mixture of kinds, that it is rare to find a pasture without eight, ten, or more, different kinds of grass in it. Some grasses predominate in one soil, and some in another. Great numbers of the fields are over-run with the wild parsnip (*pastinaca sylvestris*); I believe it is impossible to eradicate this great evil (for such it is, in an extraordinary degree), but by the plough, and drill crops, to clean it out effectually; if this is not done, it ought at least to be cut off before it seeds, but when it is suffered to remain, it exhausts the soil, and takes up the place of profitable grass. A clean meadow of natural grass, in *good order*, may reasonably produce from four to five tons of hay; six tons is not uncommon in this county, in a well improved soil.

SECT. 8. *Artificial Grasses.*

SUMMER vetches are sowed in tolerable large quantities in the northernmost parts of the county; they thrive well, are sometimes sowed thick (fifteen stone to an acre), and cut green for soiling cattle of every description.

scription. If sowed in order to save seed, they sow ten stone an acre; they are in that case *half* threshed in the winter, and given to horses instead of hay and oats; an excellent practice.

Those, who sow artificial grasses here, for the most part sow only the common red clover (*trifolium pratense*); they generally sow it with the oats. It is surprising, that farmers do not see their advantage more in sowing larger quantities of clover, that at least quadruples their quantity of fodder, besides being so admirable a preparation for wheat. The ground ought to be in high order for this or any other grass, and it should be sowed about a fortnight after the corn in dry weather, and rolled.

It may not be improper here to caution farmers against turning horned cattle upon clover with empty bellies, or in wet weather, or when there is dew upon the clover; in any of these cases it would occasion such an intestine fermentation, as would, without speedy relief, prove fatal to the animal. On an accident of this kind happening, they should be instantly stabbed in the most prominent part of the flank with a pen-knife, and a quill or tube of some kind introduced to keep the orifice open, without the least apprehension of danger, and kept moving, rubbing them at intervals.

Those, who lay down land for pasture, and do not intend to plough it again in a length of time, would do well to sow a quantity of white Dutch clover (*trifolium album*), it being perennial, and an excellent sweet pasture,

ture, and producing, though short, a close, thick sward. Where marle is convenient to give ground a good dressing, it will produce it naturally, and be attended with beneficial effects.

Rape and vetches should be cultivated upon a large scale. I have in other parts of this Essay shewn the *indispensible* necessity of these crops for *winter* and *summer* food, for *improving* the breed of *cattle* and the *land*, also adding to the dunghill, and enriching the farmer.

SECT. 9. *Mode of Hay-making.*

THE general mode of this county is to ted immediately after the scythe turn, and gather up the next day in small cocks, then break and double the cocks, break again and cock, and in three or four days, if the weather be favourable, make into large field cocks.

The great object in hay-making is, to retain the natural juices as much as possible, and the flavour and green colour of the hay. The most eligible mode, that occurs to me, is, to roll the swathe by hand into very small cocks, without disturbing its natural order, leaving it hollow in the middle for two or three days. After this, turn it inside out, and leave it two or three days more, according to the weather; it will in this state resist rain, if it should come; it will also retain its flavour, and be more nutritive. It may be afterwards gathered into field-cocks, and made up at discretion.

After

After writing the above article, I learn from Mr. Hamilton, of Larkfield, near Palmerstown, that he follows the above mode, from which he derives the following advantages ; it is less expensive, and safer from weather, and the hay, when made, retains its green colour, and is better, and more nutritive ; he has the cocks rolled up with a common pitchfork, and very small.

SECT. 10. *Dairies—their produce.*

MILK and butter are at such an exorbitant price, that this article requires some attention. Dairies, in and near populous towns, are of high importance, both to rich and poor. Milk cannot be carried far, and is highly nutritious and healthy ; the want of it, or its being at an extravagant price, are matters of regret.

It appears, upon the closest enquiry, that dairies have declined to such a degree, that there is not now, upon an average, above one cow, where there were four two years back ; this has been *partly* owing to a want of grains, the distillers having done so little business in that time, on account of the dearth of malt, and, finally, their being stopped from working at all. The only winter resource therefore left for the few remaining cows, was the small quantity of grains produced at the breweries, with hay, which is unprofitable for a milch cow. But other causes have acted powerfully to
their

their detriment. The dairyman not looking forward to future advantages, and the price of cattle considerably advanced, beyond what he paid himself, disposes from time to time of great part of his stock, which were daily slaughtered to supply the soup-houses. The deficiency, that this has occasioned, will operate against the dairies for years, and lessen, very materially, that useful article of food.

It appears, that there may be at this time (May 1801) in the vicinity of Dublin, and within four miles thereof, about one thousand six hundred milch cows, where there were formerly near seven thousand; the difference has been nearly all consigned to the butcher, as I before observed. Cows sell also at a high rate, from ten guineas to 20*l* and the price is likely to continue from the foregoing circumstance. Under these incidents, our wonder ceases at the extravagant price of milk and butter.

The average produce of a dairy of cows in summer, is about eight quarts of milk, each, in the twenty-four hours. In winter, the average produce does not exceed five quarts per day.

They are housed all the winter upon hay and grains, when they can be procured, and a few all the summer in Dublin.

The old Irish breed of cows are almost extinct, and their places supplied by an English and Dutch breed, and amongst them a few Kerry cows. These are the kinds the dairies round the metropolis are now composed of, and the dairymen say, that they are not so profitable
for

for milk, as the old Irish kind were, though they acknowledge them superior for the butcher.

A most destructive practice prevails in Dublin, of forestalling dairy cows. There is a class of men, that make a livelihood of this business, and they are so ingenious in the practice of it, that they frequently pass the cows through two or three hands, even in the same market, before the dairyman can get hold of them.

Cabbages, potatoes, or turnips would be a better and more profitable food for milch cows, than any, that is now used about Dublin, but the great value of those articles so near the capital seems to preclude the use of them in that way; there are times when they are reasonable, and might be used to advantage, or there might at all times be additional quantities of those articles raised, so as not to injure the root-market, which would occasion an increase of profit to the dairyman, and a saving of hay for the market, which the dairyman would have a better substitute for in his line. These articles of food for cattle, viz. cabbages, potatoes, turnips, clover, &c. could be given with great advantage and profit to them in the house in summer; they would yield a third more of milk and butter, than by keeping them out under the teasing fangs of the gad-fly, which distracts the poor animals, and prevents their eating. They cut and destroy more grass with their feet, in running furiously about at these times, than is generally supposed.

The abuse so prevalent in all the dairies, of adulterating the milk with water, and various other modes, is
extremely

extremely censurable. The butter is also an object for fraud; they have a method of beating up old butter, and mixing water with it to make it weigh heavy.

Dr. Johnston informed me, that he tried linseed-oil cakes as food for milch cows, and a substitute for grains. He had sixteen pound of cake for each cow, bruised, and steeped daily in warm water, with three ounces of salt; this was given at two feeds, viz. morning and evening; they ate a great quantity of hay besides, and, upon the whole, he lost considerably by the experiment.

The following is the London method of preserving brewer's or distiller's grains for a year, sound and good. "Pack them close, by spreading in a corner, or some close place; sprinkle salt through them in every layer, and, when all packed, cover at top and sides, with a plaister of wet clay." Thus food for cows may be stored in the summer, while they are at grass, ready for a winter supply. Cabbages may be preserved by taking them up by the roots, and packing them in a dry bank with earth, and their heads downwards.

SECT. II. *Prices of Hides, Tallow, Wool, and
Quantity sold.*

Ox and cow hides are a very fluctuating commodity; the butcher sells the green hides by hand, from 30s. to 3l. each, according to size and quality; they average
from

from $4\frac{1}{2}d.$ to $5d.$ per pound. The number of oxen and cows slaughtered in the year in Dublin, average to 30,000.

Tallow, in May last, sold from $4l.$ to $4l. 2s.$ per hundred; in August, from $3l. 8s.$ to $3l. 10s.$ per hundred.

At the wool-crane, Usher's-quay, Leinster wool from $16s.$ to $16s. 6d.$ per stone; Connaught wool $17s.$ to $17s. 6d.$ per stone. Upon the nearest estimation; that can be made of the quantity stored at the crane, and bought up by the manufacturers, there is near 1,200 ton weight of wool manufactured in the county of Dublin annually, exclusive of ratteent, flannels, or blankets, brought from the country.

CHAPTER IV.

FARMS.

SECTION I.

Their Size.

THE farms are in general small, particularly in the vicinity of the city, where they rarely exceed twenty or thirty acres, and are in that circuit principally occupied by, or under the denomination of gentlemen's demesnes, nurseries, kitchen gardens, and dairies; but in the more remote parts of the county the farms are from fifty acres to 150, and there is more tillage in those farms, than near the city.

SECT. 2. *Farm-houses and Offices.*

THE farm-houses of the first class are fully adequate to the land they occupy, and, in some places, more than is necessary, from the circumstance of their having been originally

originally built for gentlemen's seats, or larger farms; the offices are, however, frequently deficient. Those houses for smaller farms are moderately accommodated; but few manifest any spirit of modern improvement in their farming buildings and offices, which are in general very insufficient for the purpose of good farming.

SECT. 3. *Mode of repairing them, whether by Landlord or Tenant.*

NECESSARY repairs or additions at the entrance into a farm, are made at the expense of the proprietor. After that, if the tenant gets a lease, he is to keep all buildings in repair, and give them up so, on the termination of the lease. If yearly tenants, which is rarely the case, except with cottagers, the landlord repairs whenever necessary.

SECT. 4. *Nature of Tenures.*

LANDS are under a variety of tenures; they are chiefly freehold, some for lives renewable, others for three lives only, and others for thirty-one years; there is also a great deal of church lands, and some corporation lands, and very few at will. The payment of rent is generally half yearly, viz. the 29th of September, and the

the 25th of March, but are commonly indulged by the landlord to pay one half year when the next is near due. I can hear of no specialities in any leases of any consequence, or out of the common course; the tenant is generally left to himself to make the best he can without any restrictions.

SECT. 5. *General state of leases.*

MANY of the leases are of an old date, and of course, the holders of them derive great advantages. The oldest leases have been taken without a fine. It is now customary to demand a sum in hand, and to set at a lower rent in proportion, in which case it is commonly given for lives renewable for ever. It is assuredly a great check to agricultural improvements, to pay a fine; it lessens the farmer's capital, and, when paid, occasions an indolence in most tenants, that makes them careless of improvements; whereas, on the other hand, their efforts would be doubled, to enable them to make up the full rent, that might be reasonably laid without a fine, or without taxing their industrious endeavours too hard. Long leases would encourage farmers to improve, and consequently increase the produce for market; the great spirit of improvement, that is now abroad, combined with a long lease, would rouse their utmost energy, and

serve landlord and tenant. The tenant should undertake some lasting improvements, such as inclosing, draining, irrigating, *planting*, an article of improvement much wanted in this county; building farm yards or offices, or cultivating his farm in a superior manner; these are proper objects for granting long leases. And a tenant, that will not improve upon a *good* lease, is not worthy of holding any land.

They are under no particular restraining clauses, respecting their mode of tillage, which, I must observe, might be very advantageously introduced. What I mean is, to oblige all tenants to keep their ploughed grounds, in constant use summer and winter, and not so shamefully to omit the green winter crops, that may be raised to so great profit and advantage to themselves and the public, upon ground, that by the present mode lies half its time idle.

What quantities of fat cattle, and dung, could be thus raised? No object deserves the Society's attention more than this, to give premiums to those, who would raise the most profitable, and greatest number of crops from the same ground, in a given number of years.

SECT. 6. *Of particular clauses therein.*

TENANTS are, in some instances, debarred from ploughing under certain penalties, but confined entirely to hay and pasture. Perhaps this clause might be advantageously

tageously laid aside, both for landlord and tenant, upon a flat, clayey, retentive soil, that would require to be thrown into round or rather angular ridges, to drain off the stagnant surface water, and leave it in a situation for irrigating. It would improve the soil, enrich the tenant, and, if it was a terminable lease, the landlord also would in due time be benefited. In its former state, it would be a collection of rushes and the coarsest trash; in the latter, if put under proper management, it would be brought to a fine state of fertility, and thereby rendered adequate to the feeding and improving of heavier and better stock.

SECT. 7. *Taxes or cesses paid by tenants:*

<i>In the county.</i>	<i>In the city.</i>
Tithe,	Pipe water,
County cess,	Pavement,
Near the city, Workhouse,	Minister and church,
Hearth and window tax.	Watch,
	Workhouse,
	Lamps,
	Grand Jury cess,
	Hearths and windows.

SECT. 8. *Proportion of working horses or bullocks to the size of farms.*

THE number of horses kept, in and near the city of Dublin, is almost impossible to estimate, but as the greatest number of them are for carriages, they do not particularly come within the description of any comparison between them and bullocks. The agriculture carried on in this county, is very trifling, in comparison to more remote counties, and is almost universally done by horses, which are of a middling breed; four of them are commonly worked in a plough. At Marly, the demesne of the Right Hon. David Latouche, I saw the same man driving a pair of horses and holding the plough; he ploughed three quarters of an acre daily, with a Leicestershire swing plough; what an advantage this in farming, he could not have done more with *four horses* and a *driver*. Two oxen would be fully adequate to the same work, and could be managed with the same ease, with equal success. I have seen, in my survey, ploughs at work with four oxen in each, *and a driver*; it would have been a gratifying sight, if it had been performed with two oxen, and the ploughman himself driving; I am convinced, in most instances, it could have been effected. Oxen work well in shafts, with breeching; were these brought into more general use, the farmers would like them; they are at present upon

too

too contracted a scale, and their advantages not well known in this county. The average proportion throughout the county, of oxen and horses, with the tillage farmers, may be as two oxen to forty horses. Harrowing in seed corn, is best performed by horses, as a quick motion is required in that operation, even to keeping them in a trot.

SECT. 9. *General size of fields or enclosures.*

THE size of the farm, in a great measure, regulates the size of the fields, they are reciprocally large or small. A farm of fifty acres is generally divided into about twelve or thirteen fields, an hundred acres into fifteen or sixteen fields, and lesser farms are proportioned in the same ratio.

SECT. 10. *Nature of fences.*

THE fences in this county have great merit, near the capital particularly; they plant a double row of white thorn quick, in the breast, when making a new bank with one ditch, commonly three and an half feet deep, five feet wide at top, and two feet at bottom; they put good earth near the roots of the quick, which flourishes in

in a great degree, and soon covers the whole breast of the hedge; when kept cut, it strengthens and defends it beyond the power of trespassers in three or four years time. In the remote northern parts of the county, they do not pay the same attention to planting quicks, in their fences, but trust principally to the bare bank and ditch. When the white thorn fence is well made, it exceeds all others in strength, durability, shelter, and, when kept properly cut, ornament; during their infancy, until they cover the bank, they should be well wed, not only to encourage the growth of the quick, but to dig out or eradicate the weeds, to prevent the seeds getting into the ground and injuring it.

In making new inclosures, the tops of the banks may be sowed with furze seed (*genista spinosa vulgaris*) which may be cut every second or third year, and pounded in a wooden trough, for horses, which makes excellent food; or they may be ground by means of three rows of iron teeth, fixed in a mill shaft, to intersect two or three other rows, that are fixed in a frame parallel to the shaft, and will do the business speedily; it will be found a profitable business, as the furze will occupy ground otherwise useless.

SECT. 11. *Mode of hedge rows and keeping hedges.*

THE goodness of the fences, I observed in the last section; I wish I could add, that they met that attention in clipping and laying, that they so highly merit; when they are let to run wild and full of grass, they lose their strength and beauty; cutting them annually, with shears, after being reduced to order, would make them not only ornamental, but impenetrable to the greatest trespassers; those, who practise it, see the advantage, and it ought to induce others to follow the example. If farmers reflected upon the loss they sustain by neglecting their hedges, they would expend one shilling to save two. Where gaps occur in a hedge, the adjacent small branches may be nicked and laid across, and fixed there with a small hooked stake; they will, in that position, grow well, and in time be equal to the rest of the fence.

SECT. 12. *Mode of draining.*

THERE have been some improvements made by draining in various parts of the county, but in many places they are still much wanting. This branch of husbandry is not always conducted in the most effectual manner, and few operations would pay better. Stagnant water, upon
the

the surface of flat retentive soils, chills the earth and renders it unproductive. In the general mode of draining in this county, they sink their drains about three feet deep, and in order to raise gravel for manure, they frequently leave the same breadth at the bottom as at the top; the obtaining the manure is an object worth pursuing, but the finishing and covering the drain in this state is not right, as the water, if contracted into a stream, would clear itself better than by being scattered and trickling over a more extended space. To obviate this, a narrow gutter might be sunk in the bottom, about eight or ten inches deep, and filled with loose stones, green boughs of alder, &c. and covered over with coarse flags or flat stones, if to be procured, or if not convenient, with straw, heath, furze, rushes, &c. By this means, such soils would be converted into found and valuable meadows or pastures, or whatever the owner might think proper to convert them to. Much will depend upon the first laying out of these drains judiciously; by a skilful management, to preclude the necessity of going over the same ground again. There should be one main carriage or master drain made across the lowest part of the field, to receive the drainings from all the rest, and would be best kept open. The subordinate drains should, in general, be made within a perch of each other, in an oblique direction to the declivity. More distance may, perhaps, answer in some situations, such, for example, as have a good declivity; but where the ground lies flatter, the drains must be closer.

closer. In like manner also, the drains will require to be deeper in some places than others. In all cases, the source *must* be got at, either by sinking or boring, sometimes ten or twelve feet, or even more. The expense of draining will, no doubt, vary with circumstances, from two pounds to four pounds an acre, but it will amply pay the whole in three or four years, with profit ever after, and the rot amongst sheep will be prevented in future.

The draining of bogs, in this county, has not been much attended to, though there is some land of this description, that might be rendered highly productive by proper management.

Draining in general, in this wet climate particularly, should precede every improvement. In the county of Dublin, it is in many places necessary to surface drain the flat, strong, clayey soils, that retain water like a dish; this part of draining, viz. the drawing off top water, is so simple in itself, that it requires no explanation; other parts of this subject, cutting off springs, may, in some instances, require the abilities of an Elkington, and cannot be so clearly explained as upon the spot.

George Grierson, Esq. has had some ground drained in the parish of Tallagh, this year, according to Mr. Elkington's mode, which appears to answer perfectly well; common drains were first opened, to the depth of about two feet, and then bored at every eight or ten yards with a three inch augre, about six or seven feet deep; some of the holes, when I saw them, were throw-
ing

ing off a quantity of water, while others were dry, but, I was informed, had run.

I already remarked, in the fourth section of the second chapter, on the use of oxen, that Counsellor O'Farrel makes his drains by ploughing them with oxen, and shovelling alternately, and is now entering upon the practice of tapping.

SECT. 13. *Nature of manures.*

LIME and limestone gravel, or marle, deserves to be ranked as the foremost of the manures; the lime is common, but the limestone gravel is almost peculiar to Ireland. Lime produces a chemical or mechanical effect upon the soil, or upon other manures, with which it is mixed; first, by destroying in a short time the cohesion of dead vegetable fibres, and thus reducing them to earth, which otherwise is effected by a slow process, by gradual putrefaction. Lime, mixed with refuse tanner's bark, will, in two or three months, reduce it to a fine black earth, which it would require as many years to effect by its own putrefaction. Liming upon the sod is not so effectual, as when mixed with the soil by the plough and harrow; in the former case, it brings a sweet, fine, feeding pasture, white clover (*trifolium album*) thick, but no great luxuriance of height.

The

The quantity of lime to be used is undetermined by any thing but practice, the nature of some soils requiring more than others. I am perfectly satisfied, from experience and observation, that the land in the county of Dublin (and I believe most parts of Ireland) will take larger dressings of lime than is generally used in England. A difference may sometimes arise, from the quality of the lime, as there is scarce any of that pure calcareous nature, but contains large portions of sand, viz. from one fourth to an half, or even two thirds of its own weight; this will evidently make a material difference, and the farmer must judge of the purity of it before using, in order to ascertain with more exactness the quantity he ought to use. But *besides this*, we must look to something in the soil, that occasions so great a difference in the quantity necessary to be used in different places. A county Dublin farmer need not hesitate at laying on an hundred and fifty barrels of lime to an acre, each barrel near five cubic feet. I mention this large quantity for one reason, that almost all the limestone I have seen in this county appears of a very impure nature, consequently requires to be used copiously. Lime would be advantageously used in compost, scouring ditches, sulliage of roads, &c. I scarcely need caution any person against laying lime upon a wet soil; without being previously drained, it would be all lost.

Limestone-gravel is a species of limestone and marl mixed, of which there is an inexhaustible fund in the county of Dublin. This choice manure is very fertilizing;

ing ; three or four hundred loads (each a cubic yard) may be put over an acre ; it is frequently raised from the ditches, and answers the double purpose of draining and improving the soil, and will last a long time.

Strong blue and brown marle is interspersed through different parts of the county ; there are also veins of white marle ; they are all well worthy of attention to those who can procure them, at any *reasonable* distance ; the blue kind has the preference of all others, as *lasting* longer in its effects. The brown is of an excellent quality, nearly approaching to fuller's earth, and I have every reason to believe, if it was to be raised from a depth, it would be obtained of as pure a quality as any imported, and which the clothiers pay half a guinea a hundred weight for. Mr. Nixon, the clothier, at Chapelizod, obliged me with a trial of it, taken from the surface of the vein, and though it did not *perfectly* answer his intentions, from its impure quality, yet had it been tried deeper, there was a probability of success. The white marle, where it can be had, would be of great value for pasture, and bring fine herbage. Farmers should be roused to a sense of this valuable treasure ; though used in many places, it is not brought into half the practice it merits. Marle, that lies deep, is generally of double the value of what is got near the surface. If this therefore is the case, the extra expense of raising it should not at all deter him from such a material object, because, being of a purer nature, less in quantity will answer the purpose, and be more effectual ; the difference in quantity

erty will be made up in quality, and finally, the expense of one will be no more than of the other. It is possible, in many situations, that, by digging marle from a depth, another material advantage may be gained, which would pay the whole expense, I mean that of draining the adjacent ground; this being also a necessary object, it will be proper to lay out the ground accordingly, and, by making an extensive ditch, equal to these purposes, to accomplish the two intentions.

The blue marle being of a more tenacious nature, requires to be put out upon the ground, to lie on the surface at least six months; under this idea it should be laid on pasture, that is intended to be broke; if on clover, it will ensure a good crop, if laid on as soon as cleared from the corn, and should be well bush-harrowed and rolled in the spring. Light or sandy soils are *best* adapted to this kind; mellow or loamy earth is also highly improved by it: though I particularly mention these, yet it will highly improve most soils. As to the quantity necessary for a dressing, less than an hundred loads (cubic yards) will not be worth attempting; but in order to have the full benefit of this invaluable manure, two hundred loads, of the above dimensions, may be deemed but a middling dressing; if three hundred loads, it will not be overdoing it. The judgment of the farmer will best guide him to his own advantage, but he may be well assured, in this he runs no risk.

Peat thrown in heaps for a year to dry and rot, and then mixed with lime or marle, and put out for a crop of
barley,

barley, will succeed well for two or three crops, particularly the barley and clover to follow. No doubt peat-ashes may succeed for immediate purposes, as it yields its whole strength the first year; perhaps the top-dressing a crop of wheat may be one of its most useful purposes. I think it a waste of time to burn it into ashes; it produces but little, and I doubt whether the quantity burned would not be of more real use in its primitive state, than all its ashes, after the expense of burning them. I can only recommend *either* as a *substitute* for other more lasting manures, when they cannot be conveniently obtained in sufficient quantities.

The sulliage of the streets of Dublin, collected by the scavengers, makes a very excellent manure for either corn or grass, or will carry good dry potatoes, for which it is better adapted than stable dung, the quantity of which latter is so much used near the metropolis, being lighter of carriage, and employed so successively upon broken ground, that the potatoes produced therefrom are of a sappy wet nature, and not so saleable as those raised out of the reach of that manure, viz. four, five, or six miles from the city.

Coal-ashes is a manure to be had in large quantities in the city; it is not so good as any of the preceding articles, nor will its effects continue any length of time in the ground; it is best suited to tenacious, cold, or wet soils, and will carry good turnips. Masons have lately got into the habit of using it in mortar instead of sand or gravel, to which it is vastly inferior.

I shall

I shall only mention one resource more to the farmer, to be procured in this county. Many parts of the coast abound with fine shelly sand; no better manure need be wished for upon a strong clayey soil, such as this county has; it is a fund of neglected riches to those, who have it in their reach, and do not use it; it is certainly worth carrying four miles.

CHAPTER V.

GENERAL SUBJECTS.

SECTION I.

Population.

THE exact number of the inhabitants of Dublin, in their present numerous state, could only be ascertained by the mode, which occurred during the rebellion, viz. taking the account from the doors of every house in the city. This was effected; it originated with the Rev. Mr. Whitelaw, and was afterwards countenanced by government. The result of this enquiry has not yet transpired, as I have been informed it is intended to publish it with other matter; under these circumstances, it is impossible to arrive at an absolute *certainty*. The probability, from the great increase of buildings, consequently of inhabitants, these few years back, will make the most likely account to be not less than 300,000 inhabitants

habitants in the city of Dublin; this appears, from the general opinion of the best informed upon the subject, to be under-rated. The inhabitants of the county may amount to about 170,000.

SECT. 2. *Number and Size of Towns and Villages.*

1. DUBLIN; the capital, not only of the county, but of Ireland, and the seat of government. It is about six miles and a half in circumference, and is governed by a lord mayor, two sheriffs, twenty-four aldermen, ninety-six common-council men, and a recorder. The castle, which is the residence of the viceroy, is near the centre of the city, and four miles from the great south-wall lighthouse, which is the entrance of the harbour from the bay. The new law-courts are a most sumptuous building, on the King's-Inns-quay, uniting not only the courts of justice, but all the offices subordinate to them, with convenient chambers between each of the courts for private business, &c. The custom-house is a most superb building, extending in front 375 feet, in a grand style of architecture, and a fine quay in front, and convenient docks and warehouses on the east side, for loading or unloading all kinds of merchandize. The linen-hall is an extensive and well adapted building to its purpose, laid out with great convenience for that flourishing

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manufacture;

manufacture; great addition has been made to it a few years since; it principally owes its greatest consequence to the exertions of the Right Hon. John Foster.

The following Report of Linens, inwards and outwards, at the Linen-hall, was laid before the Board, and includes from the first of March 1798, to the first of March 1799.

INWARDS.

	Yards.
The number of packs and boxes in the hall,	
at the period of 1798, were 10,790,	
which, being averaged at 1,800 yards	
each, amount in that year to	- 19,422,000

OUTWARDS.

The number of packs and boxes sent from	
the hall in the year 1798, were 8,557,	
which, being taken at the same average,	
amount to	- - - 15,402,600

For home consumption,	4,019,400
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The quantity of linen at the several calen-	
ders, and sold in the year 1798, was	4,380,240

Of this quantity a large proportion was for home consumption.

Note

OF THE COUNTY OF DUBLIN.

83

Packs and boxes.

Note—The increase inwards, in the year
1798, compared with the foregoing
year, was

531

The increase outwards, 1,274

C. DUFFIN, INSPECTOR GEN.

*An Account of the Irish Linen Cloth, exported from the
first of March 1798, to the first of March 1799.*

Bales and boxes.*

England,	-	-	-	7,905
America,	-	-	-	1,020
West Indies,	-	-	-	487

9,412

P. WORTHINGTON.

*Custom-house,
29th March, 1799.*

* It is to be observed, that the packs and boxes exported
are larger than these inwards to the hall, being re-packed for
that purpose. J. A.

A Return of Packs and boxes entered inwards and outwards at the Linen-hall, from the first of March 1799, to the first of March 1800.

Packs and boxes.			
Inwards,	-	-	9,915
Outwards,	-	-	7,936

An Account of the Irish Linen Cloth exported from the first of March 1799, to the first of March 1800.

Yards.			
England,	-	-	31,425,969
Scotland,	-	-	1,479,423
America,	-	-	1,140,533
West Indies,	-	-	941,913
Germany,	-	-	3,000
Portugal,	-	-	185,437
Russia,	-	-	1,000
Madeira,	-	-	9,098
Streights,	-	-	1,783

35,188,156

A Return

A Return of Packs and boxes entered inwards and outwards at the Linen-ball, from the first of March 1800, to the first of March 1801.

			Packs and boxes.
Inwards,	-	-	12,570
Outwards,	-	-	8,355

This is exclusive of linens brought to the calenders.

C. DUFFIN, INSPECTOR GEN.

Trinity college is a large and beautiful building, laid out in squares, with a fine library, an anatomy-house, a printing house, a museum, and a neat park for the students to exercise themselves in. The Exchange is a magnificent building, ornamented with columns of the Corinthian order, commanding in front a fine view of Parliament-street, Essex-bridge, and Capel-street, and cost 40,000*l*. The commercial buildings are laid out with great taste and convenience, highly useful, and do honour to the merchants of the city. His Grace the Duke of Leinster's mansion in Kildare-street is magnificent; the entrance is a grand gateway of hewed stone, into a large court, forming a spacious segment of a circle. The front is ornamented with four Corinthian columns, rusticated work, balustrades, architraves, &c. and on each
side

side are two correspondent colonnades in the Doric order, forming on the whole a most elegant piece of architecture, designed by Mr. Caffels. The east front has before it a handsome lawn and shrubbery, and joins the fine open view of Merrion-square.

On the west side of the city are the barracks, which for situation, size, and accommodation, exceed any thing of the kind in the king's dominions. They are situated on a fine rising ground, in front of the river Liffey, enjoying a fine, healthy, and pleasant view of the country. It is divided into four elegant squares, viz. the royal, palatine, little squares, and horse-barracks, and is capable of containing four thousand foot, and a thousand horse.

The town is supplied with water from a reservoir or basin in James's-street, which receives a river from Templeoge, and is conveyed through the whole city by metal or wooden pipes. Ornamental fountains are also erected in various parts of the city, for the better supply of the inhabitants. The wide-street commissioners have much improved the city, and their exertions are still of high importance; Dublin can boast (by their means principally) of some of the finest streets in any city in Europe. There are several fine squares, some of them of modern date, and laid out with great taste and ornament.

To do justice to the city of Dublin, in the narrow limits of this volume, would not be in my power. What I have said can scarce communicate an idea of the trade,
or

or of the public and private edifices, with which this metropolis is enriched: a large volume could scarcely give an adequate account of the numerous improvements, which are not only completed, but are daily adding to it. The shipping along the quays are seldom less than four or five hundred in number; to do it the justice it deserves, a person that would attempt it should have no other object in view.

2. Balbriggan, a fishing town, about fifteen miles north of Dublin, with an excellent quay, where large vessels can load or unload. The cotton manufactory was carried on here to a great extent, but has now declined so much, that they are converting one of their principal mills into a flour-mill.

3. Buldoyle, a pleasant fishing and bathing town, six miles east of Dublin castle.

Ball's-bridge, a village one mile and a half south-east from the castle, where there is a valuable manufacture carried on for printing linens.

5. Ballybough, a village one mile and a quarter north-east from the castle, situated by the sea-side.

6. Balruddery, a small fishing town, fourteen miles north from Dublin castle.

7. Black-Rock, a large, handsome, and pleasant town, four miles south-east from the castle, beautifully situated on Dublin bay, and commanding a fine view of the harbour and the adjacent country; there is a great resort of company, partly for bathing, and partly for pleasure.

8. Booterstown,

8. Booterstown, a small village, situate on the south side of the bay of Dublin, $3\frac{1}{4}$ miles from the castle.

9. Bullock, a small fishing town, formerly of consequence, on the bay of Dublin, seven miles east from the castle.

10. Castlenock, a small pleasant village, near four miles west from the castle of Dublin; it derives its name from an old castle, the ruins of which are still remaining; it was built in the reign of Henry II.

11. Chapelizod, a large handsome village, two miles and three-quarters west from the castle of Dublin, beautifully situated near the Phoenix Park, on the banks of the river Liffey, with a barrack, formerly occupied by the artillery, but now by a regiment or detachment of infantry.

12. Church-town, a small village, three miles and a quarter south from the castle, frequented much by invalids to drink goat's whey.

13. Clondalkin, a village five miles west from the castle of Dublin, near the road to Naas, where is an ancient round tower in fine preservation.

14. Clontarf, a large and pleasant village, two miles and a quarter east from the castle of Dublin, on the sea-side. The Sheds of Clontarf, as they are called, derive their name from fishing stages having been formerly erected there for the purpose of drying and curing fish; it now contains a large number of handsome and well-built houses, much frequented in the bathing season, being well situated for that purpose. A great convenience

nience has been added to the town by Mr. Weeks, who has conveyed, at a great expense, a stream of excellent water several hundred yards, to a large reservoir, which he built on the beach, for the use of the public.

15. Coolock, a small village, three miles north-east from the castle of Dublin, with a neat church.

16. Crumlin, a large village, two miles and a half west from the castle of Dublin. This place is not much frequented by the citizens of Dublin, but is a great thoroughfare for travellers to the county of Wicklow.

17. Dalkey, a small village, seven miles and a quarter from the castle of Dublin, commanding a view of the bay; it was formerly a repository for goods belonging to the merchants of Dublin. There are some ruins here of old castles, and places of defence against pirates, who formerly swarmed on the Irish coast; Bullock was the port when the trade was carried on.

18. Dalkey Island, is about a quarter of a mile from the shore, contains about fifteen acres, and is tolerably fertile, and esteemed an excellent salt-marsh; sheep, particularly, soon grow fat, and their flesh acquires a peculiar fine flavour. The island is uninhabited.

19. Donnybrook, a pleasant village, two miles south-east from the castle of Dublin.

20. Donnycarney, a small village, two miles north-east from the castle, pleasantly situated on the strand near Marino, the seat of the Earl of Charlemont.

21. St. Doulough's, a small village, four miles and a half north-east from the castle of Dublin; the neighbourhood abounds with beautiful seats.

22. Drum-

22. Drumcondra, an agreeable and pleasant village, two miles north from the castle of Dublin: it is well inhabited, and there are a number of gentlemens' seats in and near it.

23. Dundrum, a small village, three miles and a half south from the castle of Dublin, on the high road to Powerscourt.

24. Dunleary, a handsome well inhabited sea-port town, five miles and a quarter east from the castle of Dublin, resorted to by the packets at low-water.

25. Dunsink, a very pleasant village, four miles north-west from the castle of Dublin. On the summit of Dunsink-hill is the observatory of Trinity College.

26. Finglafs, a large and handsome town, three miles north from the castle of Dublin.

27. Glafsnevin, a very pleasant, well-built, and large village, two miles north from the castle of Dublin. There are many fine seats near this place. The Dublin Society have here, at a very great expense, established a Botanic Garden; it is well laid out, and conducted upon the Linnæan system with great accuracy, noticing even greater varieties, than are introduced in the above system. The hot-houses are furnished with a vast variety of curious exotics, and are now extending considerably, by the addition of two large buildings for the same purpose; the whole contains sixteen and an half Irish acres, and is well worthy the attention of the curious.

28. Hampstead, a small pleasant village, two miles north from the castle of Dublin.

29. Harold's-

29. Harold's-cross, a village or suburb joining the city of Dublin, one mile south from the castle.

30. Howth, a small town, seven miles and three quarters east from the castle of Dublin; it is pleasantly situated, and enjoys a fine air. There is a fine stream of water running near the village, that would answer well for some manufacture. There is a good lighthouse upon the promontory, it being the north entrance of the bay of Dublin. Ireland's Eye is half a mile north from the Hill of Howth, and fronting Buldoyle, distance about half a mile; this little island is composed of a high rock on the north side, and what is called the Stags on the east, being a perpendicular rock of great height, and very dangerous for shipping in tempestuous weather; it was supposed to have been formerly joined to the hill of Howth; some medicinal and fragrant plants grow upon it, and on the south-west side are the ruins of an old chapel: it is about three-quarters of a mile in length, and half a mile in breadth.

31. Island-bridge, a suburb or outlet of Dublin, one mile and a half west from the castle of Dublin; it contains many good houses, and has a remarkable new bridge over the river Liffey; it contains but one elliptical arch of an immense span, viz. 104 feet 10 inches.

32. Kilgobbin, a small village, eight miles south-east from the castle of Dublin, on the road to Powerscourt.

33. Killiney, a small village, eight miles south-east from the castle.

34. Killester,

34. Killester, a pleasant village, three miles N. E. from the castle of Dublin.

35. Kilmacud, a small village, four miles S. E. from the castle of Dublin.

36. Kilmafhogue, a small village, four miles S. from the castle of Dublin.

37. Kilshogan, a village, eight miles and a quarter N. from the castle of Dublin.

38. Kilternan, a small village, six miles and three quarters S. E. from the castle of Dublin. A mile beyond this is a very remarkable chasm in a mountain, called the Scalp; it appears as if it had been rent asunder by an earthquake; there is an excellent road made through the chasm, leading to Enniskerry.

39. Kimmage, a small pleasant village, two miles S. W. from the castle of Dublin.

40. Knockedan, a small village, seven miles N. from the castle of Dublin.

41. Laughlinstown, a small village, seven miles S. E. from the castle of Dublin.

42. Leixlip, a large and handsome town, well inhabited and much improved, on the banks of the Liffey, eight miles W. from the castle of Dublin.

43. Little Cork, a small village, within half a mile of Bray, and near ten miles S. E. from the castle of Dublin.

44. Loughshinny, a small village, fifteen miles N. W. from the castle of Dublin; there is a fine harbour here, and a pier not finished, but which well deserves attention, on account of a good copper mine, that has been worked
close

close to the quay. It might also, at no great expense, be rendered of great utility to shipping, to shelter them from storms.

45. Lucan, a handsome town, near six and an half miles W. from the castle of Dublin. In the demesne of Mr. Vesey, there is a sulphureous spa, most probably issuing from a vein of coal; another spa, of the same nature, rises in the small river, between Lucan and the lands of Eskar.

46. Lusk, a small fishing town, between Swords and Rush, eleven miles N. from the castle of Dublin.

47. Luttrellstown, a small pleasant village, five and an half miles W. from the castle of Dublin, beautifully situated on the banks of the Liffey.

48. Mallahide, a good fishing town, six and an half miles N. from the castle of Dublin, situate on the Irish Channel, much exposed to the easterly winds.

49. Mallahidert, a village, six miles N. W. from the castle of Dublin, with a remarkable fine well.

50. St. Margaret's, a small village, five miles and three quarters N. from the castle of Dublin.

51. Milltown, a large and pleasant village, two miles S. E. from the castle of Dublin, not so much frequented as formerly.

52. Monkstown, a pleasant small village, five miles and a quarter S. E. from the castle of Dublin, where there has been lately built an elegant church.

53. Mount Venus, a small village, five miles S. from the castle of Dublin.

54. Naul,

54. Naul, a small village, fourteen miles N. from the castle of Dublin, on the verge of the county; there is a very beautiful glen near it, with rocks and a number of caves. The old castle, situated over this glen, gives the whole a most picturesque appearance.

55. Newcastle, a poor village, though formerly a borough town, and returned two members to the Irish Parliament. It is seven miles W. from the castle of Dublin.

56. Nock-Lion, a small pleasant village, three miles and an half S. from the castle of Dublin.

57. Old Bawn, a small village, four miles and an half S. W. from the castle of Dublin.

58. Old Merrion, a small village, two miles and an half E. from the castle of Dublin.

59. Palmerstown, a village, three miles and three quarters W. from the castle, much frequented by travellers.

60. Philipsburg, a handsome village, one mile and an half N. E. from the castle of Dublin.

61. Phippsborough, a handsome village, built within a few years, one mile and a quarter N. from the castle of Dublin.

62. Portobello, a suburb S. of Dublin, near Kevinsport.

63. Priest-house, a small poor village, two miles and an half S. E. from the castle of Dublin.

64. Raheny,

64. Raheny, a large village, four miles N. E. from the castle of Dublin; there is another village, half a mile from this, called Raheny on the Strand, to distinguish it from Raheny in the country.

65. Ranelagh, a large and pleasant village, one mile and an half S. E. from the castle of Dublin; there are a great number of good houses, and it has been much improved within these few years.

66. Rathfarnham, a large handsome village, two miles and three quarters S. from the castle of Dublin, situate on a dry bank.

67. Rathmines, a pleasant fine village, one mile and an half S. from the castle of Dublin; it is extremely rural and healthy, and well wooded and watered. In the time of the civil wars, the Duke of Ormond was defeated at this place, by the parliament's forces under the command of Colonel Jones, when there were 4000 killed, and 3000 taken prisoners.

68. Richmond, a beautiful village, one mile and an half N. E. from the castle of Dublin; the villas and seats are numerous and pleasant.

69. Ringsend, a village well known, at present little frequented, and almost in a state of ruins, one mile and an half from the castle of Dublin; the great South wall begins here, and ends at the Light-house, about two miles and an half. The Pigeon-house is now erected into a strong fort, and a garrison kept there to defend the harbour.

70. Roche's-town,

70. Roche's-town, a pleasant village, seven miles E. from the castle of Dublin; it lies exposed to the sea air, and is frequented by persons to drink goat's whey.

71. Rush, a large fishing town, 13 miles and an half N. from the castle of Dublin, situate on the sea coast, and has the island of Lambay directly opposite, about the distance of two miles and an half. This island is about two miles long and one and an half broad, remarkable for great quantities of rabbits, and numerous flocks of sea fowl; there is also shell-fish about the island.

72. Saggard, a small village, seven miles S. W. from the castle of Dublin.

73. Sandymount, a pleasant village, greatly improved, two miles E. from the castle of Dublin.

74. Santry, a small village, situate on the great northern road, three miles and a quarter N. from the castle of Dublin.

75. Skerries, a considerable fishing town, fifteen miles N. from the castle of Dublin.

76. Stillorgan, a village, four miles and a quarter from the castle of Dublin.

77. Swords, formerly a borough town, seven miles N. from the castle of Dublin. This town returned two members to the Irish parliament, but on account of the union, is now discontinued.

78. Tallagh, a large village or town, four miles S. W. from the castle of Dublin, situate in a fine country.

79. Temple

79. Temple Oge, a small village, three miles S. W. from the castle of Dublin.

80. Turvey, a village, nine miles N. from the castle of Dublin.

Gentlemen's Seats and Improvements.

Curduff, the seat of Thomas Baker, Esq. a good plain house and garden, with an extensive demesne of 200 acres, well improved and in high cultivation.

Malahide Castle, the seat of Colonel Talbot, beautifully situated on a rising ground, commanding a most extensive and beautiful view of Lambay, Howth, Ireland's Eye, &c. together with a most extensive inland view of the adjacent country; the demesne is well wooded, highly improved, and laid out with great modern taste.

Newbridge, the seat of Thomas Cobb, Esq. is a large and elegant structure, that has been improved within these 30 years; it is delightfully situated in the centre of a park of two hundred acres, elegantly planted with a variety of forest and other ornamental trees, in the highest state of preservation, commanding a most extensive prospect of the surrounding country for some miles.

Turvey, the seat of the Kingsland family, was formerly of some note, but now in ruins; the demesne is, nevertheless, worthy of attention.

Rathbane, the seat of the late Hamilton Gorges, Esq. now set to a farmer, by his son, Sir Richard Gorges Meredith, Bart. Little can be said of it, as the extensive woods, lately on this demesne, are now cut down.

Santry, the seat of Charles Domville, Esq. an extensive demesne, with a large plain building, surrounded with a variety of full grown timber, and enclosed by a stone wall.

Abbeville, the seat of the Right Hon. John Beresford, a fine demesne of an hundred acres, well improved, with a large and elegant house, and a fine lake abounding with carp, tench, and trout. The gardens are beautiful and extensive, with a vast range of glass for pines, grapes, and peaches, and also an extensive green house, containing a variety of exotic and other plants.

Feltrum, the seat of the Rev. Chas. Cobb Beresford, a demesne of about an hundred acres, well improved, and in good order, with a small plain house, well situated, commanding an extensive view of Howth, the bay of Dublin, Wicklow mountains, &c.

Greenwood, the seat of Richard Sayers, Esq. formerly of Sir William Montgomery, a neat small house and demesne, with good shrubberies, and well planted with all kind of trees.

Liffen Hall, the seat of Francis Synge, Esq. formerly belonging to the late John Hatch, Esq. pleasantly situated upon an arm of the sea, near Mallahide; it is a large building, with a few good timber trees interspersed.

Balnabrough,

Balnabrough, now called Seafield, the seat of John Arthur, Esq. beautifully situated on the same arm of the sea as Liffen Hall, containing about an hundred acres, well improved, and the whole enclosed by a ten feet wall.

Rush House, the seat of Roger Palmer, Esq. beautifully situated, commanding a most extensive view of the sea and adjacent country, finely wooded, good gardens, and the whole highly improved.

Belcamp, the seat of John Claudius Beresford, Esq. the demesne and farm adjoining, an hundred and eighty acres; a small neat house, pleasantly situated, the farm well cultivated, gardens new and well laid out, with pigery and grape house, &c.

Belcamp, the seat of the Hon. Francis Hutchinson, a large handsome brick house, beautifully situated, with a fine view of the sea, and adjacent country; the demesne consists of about fifty acres, well cultivated and wooded, and excellent gardens.

Killester, the seat of Sir William Gleadowe Newcomen, with a spacious house, a demesne of near forty acres, well wooded; the walks are judiciously laid out, so as to form a compleat country residence, though situated within a mile and an half of the capital. The gardens are elegantly disposed, a large extent of glass well furnished with pines, grapes, &c. of the first flavour.

Clontarf Castle, the demesne of Captain Vernon, a

fine edifice, with noble apartments, excellent gardens, and a beautiful well improved demesne.

Hampstead, the seat of ——— Hamilton, Esq. a fine house, handsomely situated, within a short distance of Balbriggan, near the sea, which forms a beautiful scene, covered with numerous fishing vessels.

Portrain, late the residence of Hampden Evans, Esq. now of Counsellor Green, a beautiful modern house, pleasantly situated near the sea. The island of Lambay forms a fine object, at the distance of three miles.

Cabragh, the seat of Lord Norbury, a capital house, well situated, with a fine prospect, a demesne well wooded, and well improved gardens, &c.

Busby Park, the seat of Abraham Wilkinson, Esq. a very large elegant house, with a beautiful prospect of a well improved neighbourhood. The demesne consists of about forty acres, well improved, laid out in great taste, and enclosed with a stone wall; the gardens are extensive, and contain a quantity of glass for pines, grapes, peaches, &c.

Terrenure, the seat of Robert Shaw, Esq. The house is large and elegant, with a good view of the adjacent country. The demesne consists of about thirty acres, is well improved, and contains extensive shrubberies. The gardens are well laid out, and in fine order, and the whole enclosed with a good stone wall.

Woodtown, the seat of George Grierison, Esq. a large and elegant house, well situated, with a pleasant view of a good neighbourhood. The demesne consists
of

of about an hundred acres, improved to the highest state of perfection, by draining, liming, &c. There are good gardens, and every attention is paid to render it a charming retreat.

Hollypark, the seat of L. Foote, Esq. The house is excellent and pleasantly situated, the demesne laid out with great judgment, contains about ninety acres, and is well wooded and watered; the gardens are valuable and extensive, and well laid out.

Marly, the demesne of the Right Hon. David La-touche. The house is extremely elegant, and the farm-yard and offices very commodious; the gardens are handsome and extensive, and contain a great deal of glass; the whole abounding with a variety of fruit, &c. The demesne consists of upwards of 300 acres, and is beautifully laid out with fine walks, well wooded, remarkably well watered, and skilfully planted, and the whole well enclosed with a good stone wall.

Portfield, the seat of Lord Avonmore; an excellent house, well situated; a fine demesne, well planted, well watered, and beautifully situated, with a fine garden, and the whole well enclosed.

Rathfarnham Castle, the seat of the most noble Marquis of Ely; a very grand house; a large demesne, beautifully wooded and watered, and laid out in a magnificent stile; the gardens are beautiful and extensive, with a great quantity of glass, and enclosed with a remarkable high wall.

Roebuck,

Roebuck, a fine old castle, in good order, the seat of ——— Crofton, Esq.; a small demesne and good gardens.

Cork Abbey, the seat of the Right Hon. Theophilus Jones. The house is large and elegant, which, for situation, can hardly be equalled; the demesne is large, well cultivated, and improved, and beautifully ornamented with full-grown trees; the gardens are large and well laid out, with a good range of glafs for grapes, green-houses, &c.

Woodbrook, the seat of ——— Webb, Esq., a fine house, commanding a great view, particularly of the sea; a handsome well improved demesne, and the garden well laid out, and in good order.

Corinken, the seat of Major Cockburne, a fine house, which commands an extensive view, with a demesne of an hundred acres, well planted and improved.

Leighlinstown, the seat of Judge Day, a good house, with a large and beautifully ornamented demesne, with full grown trees; it has a fine prospect, and the gardens are in great order, and well laid out.

Cabinteely, at present occupied by the widow of Robert Byrne, Esq. a very large, elegant, modern house, and extensive demesne, well planted, improved; and beautifully situated, commanding a fine view of the sea, and surrounding country.

Shankhill, the seat of Counsellor Roberts, beautifully situated on a hill above old Connaught; a fine house, which commands a most enchanting view of the whole surrounding

surrounding country, the sea, town, and harbour of Bray, with its shipping, &c., and for planting, shrubberies, garden, &c. stands unrivalled.

Thornhill, lately the seat of the Right Hon. John Monk Mason, now of the Rev. ——— Strong, a large and elegant house, commanding a charming view of the sea, Bray, and all the surrounding country; the demesne is small, but highly and picturesquely improved, with shrubberies, gardens, &c. This beautiful seat, from a wild uncultivated spot, was built on and improved by Mr. Mason.

Palermo, the seat of Sir Francis Hutchinson, Bart.; the house is large and pleasantly situated; the demesne between fifty and sixty acres, indifferently cultivated; shrubberies well planted and laid out; gardens large and handsome.

Cabinteely, the seat of John Dwyer, Esq., an excellent house, a small demesne, well improved with gardens, &c.

Kilmacud, the seat of James Farrel, Esq. a good house, pleasantly situated, with a demesne of forty acres, well wooded and improved, good gardens well laid out, and the whole well enclosed, lately the seat of Sir Michael Smith, Bart.

Stoneville, the seat of Colonel Pratt, a good house, with a fine view, and a well improved demesne of twenty-six acres, and good garden.

Gannat, the seat of Sir John Macartney, Bart. a large, handsome house, well situated with a fine improved demesne

demesne of twenty-six acres, excellent gardens, and a great deal of glass for pines, grapes, &c.

Johnstown, the seat of Major Armstrong, with a good house, and a demesne of fourteen acres, well improved, good gardens handsomely laid out, and in fine order.

Mount Merrion, the seat of Richard Verschoyle, Esq., an excellent house, a demesne of about an hundred acres, well wooded, and a handsome well laid out garden, kept in good order.

Stillorgan house, at present inhabited by Nicholas Lefevre, Esq. the estate of Lord Carysfort. This house and demesne, when in the hands of Lord Carysfort, was one of the most beautiful seats in Ireland; but at present it is so subdivided, that it loses its former splendor. The original demesne, when united, contained upwards of an hundred acres, finely wooded and watered, with elegant gardens, &c.

Kilmacud, the seat of James Williams, Esq., a good house, beautifully situated, commanding an extensive view of the sea, and a fine improved country; the demesne is about twenty-five acres.

Willow Park, the seat of Alderman Alexander, a good house, a demesne of about eighteen acres, well planted and improved; fine gardens, with a good deal of glass, and all well enclosed with a stone wall.

Frascati, now inhabited by Lieutenant General Needham, an elegant house, a demesne of about twenty acres, well planted, fine walks and shrubberies, excellent gardens, and well enclosed with a stone wall.

Newtown,

Newtown, the seat of John Lees, Esq., a beautiful house, finely situated, and, for the size, one of the most improved spots in the kingdom.

Temple Hill, the seat of the Right Hon. Lord Clonmell, a beautiful house, situated upon a great eminence, and commanding an extensive view of the sea and the surrounding country; the demesne, about ten acres, is well planted; there are fine shrubberies and gardens, with a great deal of glass, and enclosed with a stone wall.

Newtown, the seat of Lord Cloncurry, a remarkable good house, beautifully situated, with a fine prospect of the sea; the lawn very handsomely laid out.

Merville, the seat of Richard Bolton, Esq., a neat house, beautifully situated, with a small demesne, good gardens, and a beautiful green-house: Adjoining to this seat is the highly improving farm of Tipperstown, consisting of 150 acres, belonging to Counsellor O'Farrel, under a state of the highest cultivation imaginable, where a very complete farm-yard is now erecting.

Kilternan, the seat of Captain Anderson, a good house, beautifully situated, commanding a great prospect of the sea and adjacent country, and a demesne of an hundred acres well planted.

Leopardstown, the beautiful seat of Colonel Coote, an elegant house, finely situated, with a demesne of two hundred acres, highly improved from an almost barren spot, well laid out with handsome walks, gardens very elegant

elegant and extensive ; when the plantations, which are great, get up, few places will rival it in any country.

Merville, the seat of Sir Thomas Lighton, an excellent plain brick house, with a demesne of about thirty acres, well enclosed with a stone wall ; it is well laid out, and in good order, with some timber trees, and highly cultivated. The gardens are remarkable for glass, being more extensive than most in the country.

Next adjoining the above is the seat of Ambrose Moore, Esq., an excellent new house, just finished ; the demesne lately planted, and promises to be a handsome seat.

Sans Souci, the seat of Peter Digges Latouche, Esq., a good house, with a fine view of the sea and intermediate country. The demesne is well wooded ; extensive shrubberies, good gardens, and the whole well enclosed with a stone wall.

Mespil Bank, the seat of David Courtney, Esq., a good house, well situated, with a demesne of about nine acres, and some good timber trees, good garden and shrubbery, and the whole well enclosed with a stone wall.

Lucan, the seat of George Vesey, Esq., a large and elegant house, situated in the middle of the demesne, which contains about forty acres, extremely well wooded ; it is bounded on the north by the river Liffey, on the banks of which there are fine walks, agreeably diversified ; there are excellent gardens, and a great deal of glass for pines, grapes, &c.

Palmerstown,

Palmerstown, the seat of the Right Hon. Lord Donoghmore, originally the mansion seat of the Right Hon. Lord Palmerstown, a fine house, elegantly situated on the banks of the river Liffey, commanding a most delightful view. The demesne consists of about forty acres, finely improved; there are very good gardens, and a great deal of glass.

Luttrel's-town, the seat of Luke White, Esq., an elegant house; the demesne, consisting of four hundred acres, is extraordinary well wooded and watered; there are also excellent gardens, and the whole is enclosed with a stone wall.

Broomfield, the seat of Edward North, Esq., a large and elegant house, well situated, with a demesne of about twenty acres, well wooded and watered; the gardens are excellent, and contain a quantity of glass; it is bounded on one side by the river Liffey, and the rest enclosed by a stone wall.

Diswell's-town, the seat of Thomas Kennan, Esq., an elegant, large, modern house, pleasantly situated on a rising ground, with a fine prospect of a beautiful improved country. The demesne consists of an hundred acres, highly improved, and well wooded; the gardens are elegant, and laid out in the first style.

Diswel's-town, the seat of the widow Ricky, a good house, a good garden, and a demesne of about fifty acres, enclosed with a stone wall.

Edmundberry, the seat of the Right Hon. Lord Perry, an elegant house, pleasantly situated, with a charming
view

view of the surrounding country. The demesne consists of about sixty acres, is well wooded and highly improved; bounded by the river Liffey on one side, and the remainder enclosed with a stone wall. The gardens are elegant, with extensive glass for grapes, pines, peaches, &c.

Woodfield, formerly the seat of the late Colonel Clements, but now converted into an academy. It contains an elegant large house, pleasantly situated on the banks of the river Liffey; the demesne contains about fifty acres, and is in excellent order; there is also a good garden, and plenty of glass.

Hermitage, the seat of Colonel Handfield, a good house, pleasantly situated, commanding an extensive view on the banks of the river Liffey, and enclosed with a stone wall. The demesne consists of about eighty acres, and is well wooded; there are good gardens, and the whole laid out to advantage.

Mount Sackville, the seat of Thomas Kemmis, Esq., a very good house, and pleasantly situated, with a good garden, and a demesne of about fifty acres.

Milltown, the seat of Judge Chamberlain, a capital house, pleasantly situated, with a beautiful small demesne, well wooded, good gardens, &c.

Milltown, also the residence of Baron George, a good house, well situated; a small demesne, well wooded, good gardens, and all well enclosed with a stone wall.

Viceregal Lodge, Phoenix Park. This house was originally built by the Right Hon. Nathaniel Clements,
father

father of the present Lord Leitrim, when Ranger of the Park; it was purchased from him by government, in the year 1784, as a country residence for the Lord Lieutenant. It is a large brick house, beautifully situated, commanding, to the east, a fine view of the city and harbour; to the west, an extensive and varied prospect of a highly decorated country, bounded partly by the Wicklow mountains; the gardens are superbly laid out, and the whole forms an enchanting scene.

Drumcondra, the seat of ——— Langridge, Esq. (estate of Lady Charleville), a fine house, with a good view; a demesne of about twenty acres, well wooded; good gardens, with a good deal of glass for pines, grapes, &c.

Primate's-Hill (Drumcondra), the seat of the widow Sweetman, a good house, surrounded with fine well-grown timber trees, in a demesne of about fifty acres, enclosed with a stone wall, good gardens, &c.

It would be endless to enumerate the vast number and variety of beautiful seats interspersed through this county; the description of them would in itself form a large volume, and be far beyond the limits of this work. There are thousands of small neat houses, elegant demesnes, with good gardens, hot-houses, and green-houses to most of them; and the beautiful situations, that abound here for those seats, are not to be surpassed, either for number or elegance.

[SECT. 3. *Habitation, Fuel, Food, and Clothing of the Lower Rank—their general Cost.*

COTTAGERS, or those of the lower rank, are numbers of them wretchedly provided with habitations; the use of thatch also is too prevalent, and is subject to many inconveniencies. If one of these hovels should be burned, wretched as it is, a poor man is materially injured; the thatch is dearer than slates or tiles in a length of time; it is a harbouring also for vermin, that will do more injury to his potatoes, meal, and bread, though almost insensibly, than can be well imagined; add to this, that a mud-wall cabin, if the roof is not constantly kept in repair, will soon moulder and decay. A cottage, constructed of good mason work, six or seven feet high from the surface of the ground, and the floor a foot or two elevated, fourteen feet wide by twenty feet long, the roof slated, and otherwise put comfortably out of hands, might be erected for twelve or fourteen pounds, according as materials are convenient. A mud-wall cabin, with a thatched roof, done in the common slovenly manner, will cost within two or three pounds of it. The difference of the comforts it would then afford, together with the future saving, would attach the occupier to the spot, and, what is of more consequence, to his employer, whom if he offended, he might be apprehensive would turn him out,

out, and put a person in, that would be more to his liking. Thus a labourer would find it his interest to act properly, while his landlord acted with liberality to him. Clay floors are universally adopted in this sort of buildings, and, when dry, and made properly, are very good. The rent of a cabin near the city is from 3*l.* to 4*l.* a year; in remoter parts of the county, farmers sometimes accommodate their labourers with cabins gratis, and in other places they pay a small rent.

The fuel of the lower class is a scarce article in this county; some turf is to be had in different parts of the range of mountains from the Scalp to Tallagh, and a small portion in the north; in other parts, the hedges are demolished without mercy, and, in many places, they gather the dung from about the fields, and even burn straw. These are serious matters; I know not how they can be redressed (and yet they ought, if possible) except proprietors were to furnish fuel.

The food of cottiers is potatoes and milk; the former article having been lately so dear, they substituted bread; occasionally they have stirabout made of oatmeal and water. The poor suffered severely these two years back, under the great scarcity and high price of provisions; those, who had families, were in a miserable way.

The clothing of the lower rank in this county is principally effected at the fairs, where they can in general supply themselves with either ratteens or frizes. The ratteens are sold at from 5*s.* to 6*s.* a yard, and are higher priced

priced than frize, being a degree finer ; they are strong, and warm wear. Frize is bought in the same fairs, at from 3s. 3d. to 4s. per yard, according to the quality ; it takes about five yards and a half to make a coat and waistcoat. This manufacture is excellently adapted to poor people; it is strong, cheap, and warm.

Price of Wages, Labour, and Provisions.

LABOURERS wages near the metropolis are at present from 8s. to 9s. per week, where constantly employed the year round ; if only for a short time, they commonly get 9s. 9d. per week ; in harvest time more, according to the mode of their employment, whether with or without provisions, the necessity of the time, or other contingencies.

Potatoes are planted by piece-work, in the common mode, at $3\frac{1}{2}d.$ per perch of twenty-one feet in length, and ten feet broad for ridge and furrow ; sometimes the seed is laid in the bargain, according as it is agreed, or as the ground may be loose or strong.

Turnips are twice hoed for a guinea an acre. I wish I could say that there was much of this work going forward in the county.

Digging loose ground is performed for 3d. to $3\frac{1}{2}d.$ a square perch, containing forty-nine square yards.

On

On ground, that is easily wrought, ditches are dug four feet deep, five feet wide at top, and sloped to two feet at bottom, for from 2*s.* 2*d.* to 2*s.* 8½*d.* a perch, and a double row of white-thorn quicks laid in the breast, as they make the bank; the owner of the ditch furnishing the quicks for the workmen on the spot.

Hay is mowed at from 6*s.* 6*d.* to 10*s.* an acre, according to the crop, and the state it may be in; if lodged, and a heavy crop, it makes a great difference to the mower in point of time, and, consequently, price.

Threshing wheat, 1*s.* per barrel;

———— Oats, 5*d.* do.

———— Barley, 8*d.* do.

The time of labour is from six o'clock in the morning to six in the evening, allowing, out of that time, half an hour for breakfast, and one hour for dinner. In harvest time they work from sun-rise to sun-set, and in winter, as long as they can see.

Farmers and others ought to oblige their workmen, when paid their weekly wages, to go for change to the meal-shops or bakers, and not to whiskey-shops to dissipate their hard earnings.

The following Table contrasts the price of Provisions in Dublin Market, in April and August, this Year.

ARTICLES.	April 1801.		August 1801.	
	s.	d.	s.	d.
Wheat-meal per stone,	-	4 0	2	8
Oatmeal, per ditto, -	-	4 8	2	4
Barley-meal, per ditto, -	-	3 3		
Indian meal, by Government orders, - - -	-	2 2		
Beef, medium, per lb.	-	0 10	0	6½
Mutton, ditto, ditto, -	-	0 10	0	6
Veal, ditto, ditto, -	-	0 10	0	6
Potatoes, per stone, -	-	1 9	0	9
Herrings, per hundred, -	-	6 0	4	4
Fresh fish; the market well supplied, and, in general, the cheapest provisions that come into it; cod could be bought commonly in April at an average of 2d. per lb.				
Vegetables have been, and still continue very cheap.				
Milk, from 6d. to 4d. a quart.				
Butter, per lb.	-	1 4	1	0
Eggs, per hundred, -	-	7 0	6	0
Bread, for 1s.	-	3lb. 8 oz.	3lb. 11 oz.	
Bacon, per lb.	-	1 0		
Hung beef, per ditto, -	-	0 11		

SECT.

SECT. 5. *State of Tithe—its general Amount on each Article—what Articles are exempt, and what charged by Modus.*

THE Tithe in general, in this county, appears to be conducted upon liberal principles; it is constantly compounded for by a reasonable modus, and potatoes are tithe-free: the modus in the different parishes through the county differs but in a very trifling degree, and, in general, is charged as follows:

Wheat, from 7s. to 10s. per acre,	} According to their quality.
Barley, — 6s. to 8s. per ditto,	
Oats, — 5s. to 7s. per ditto,	
Hay, — 2s. 6d. to 10s. in proportion to goodness, and distance from the capital.	

SECT. 6. *Use of Beer and Spirits—whether either, or which, is encreasing.*

THE use of beer in this county, among the common people, has not been in so much repute, at any time, as spirits; the demand is not great at present for either, as they cannot afford to purchase them; there is a virtue in necessity, that might be happily continued in better times,

times; but, from the extreme partiality of the common people to spirits, little else can be expected, but that they will return to the old practice, when they can afford it. When they had it in their power to follow it to excess, every bad consequence ensued—*loss of time*, and *combinations* among tradesmen; but now that whiskey is dear, and the means of obtaining it so badly to be spared by the common people, little rioting or drunkenness is to be seen in the streets, and the plebeians, formerly vitiated by their inordinate use, are now demeaning themselves to good order and lawful authority, and working an *apparent* reformation. No remedy can be applied so well for the continuance of this, as to keep up the price of spirits as high as possible; in particular, by laying an exorbitant tax upon retailers, and, at the same time, preventing any fraudulent dealers in that article; making malt liquor *good* and *cheap*; and employers of either working manufacturers or labourers setting themselves against drunkenness in the most determined manner. *They* may effect a reformation when others could not; though it is scarcely to be hoped it can be done speedily, yet it might be procured insensibly. The legislature might interpose a remedy, that might, with other assistance, prevent the evil.

SECT. 7. *State of Roads, Bridges, &c.*

THE roads in this county are in excellent order, being frequently repaired at a great expense. A new one was made last summer, from the Grand canal, Portobello harbour, into Rathmines, the old road being situated so low, as to be overflowed upon any extraordinary rain or snow, and also narrow and winding; the new one is about half a mile in length, and adds greatly to the neighbourhood, in point of utility and ornament.

A road has been formed over the commons of Crumlin, near two years, and remains still uncovered; it is intended to be made in a straight line to Tallagh, and will, when finished, be a useful road.

A great road is making through the mountains, in the southernmost part of the county, chiefly by the military. I am informed, it is intended to be continued through the mountains of Wicklow, to near Wexford town; they have commenced their operations near Kilmashogue, and made some progress; it will, when completed, be of the utmost service.

The bridges are universally in a good state, excepting some in the city; Ormond bridge, Old bridge, and Barrack bridge, are too narrow.

SECT. 8. *State of navigations and navigable rivers.*

THE river Liffey, as I before observed in the sixth section of the first chapter, is navigable for large vessels up to the New Custom-house, and Carlisle bridge.

The Grand canal has near four hundred boats, and carries on a good inland trade; their numbers have been gradually increasing since its origin; the freight formerly paid, inwards, to Dublin, was three halfpence a ton, per mile. Outwards, an halfpenny per ditto, and for manure ten shillings per boat load. The freight, at present, is three pence a ton, per mile, inwards, and two pence per ditto outwards; this portends an increasing trade on that canal.

The Royal canal has twenty-five boats, two parcel boats, and three packets; and as it is not yet completed, further than Kilcock, (twenty-one miles) it carries on no great trade at present. The tolls charged are, two pence per mile, for each ton of merchandize, in and out of Dublin; three halfpence per ton for provisions, into Dublin. Bricks are charged one shilling a ton, and manure four pence a ton, any distance. Turf one penny a ton, per mile, to Dublin.

By a new treaty, between Government and the Canal Company, the tolls are to be considerably reduced immediately.

SECT.

SECT. 9. *State of fisheries.*

THE number of wherries belonging to the county of Dublin, employed in this business, at present, are as follows:—

Howth,	-	7 wherries.
Buldoyle,	-	9 ditto.
Malahide,	-	3 ditto.
Rush,	-	16 ditto.
Skerries,	-	36 ditto.
Balbriggen,	-	9 ditto.
Ringsend,	-	7 ditto.

Total, 87

These wherries carry each seven or eight men, and receive a parliamentary bounty of twenty shillings a ton. The hands are all employed upon shares, two of which go to the owner of the wherry. Those, therefore, which carry eight hands, are divided into ten shares. In the season, they catch cod, ling, haddock, ray, herrings, &c. They generally complain, that the parliamentary bounty is too small at present, on account of the great rise of iron, hemp, and other articles in their line.

Besides these wherries, there are about twenty smacks and five Seine nets, occupied in the salmon fishery, between the Bay of Dublin and Dunleary; those smacks receive

receive no bounty, and are, with many other small boats, employed, in the proper season, in the taking of herrings. At Dunleary, there are also eleven yawls, and at Bullock seven, employed in catching whiting, pollock, and herrings.

There is also a considerable salmon fishery on the river Liffey, belonging to Sir William Worthington, where eighteen men are employed from the first of January to Michaelmas; it is divided into the upper and lower fisheries, viz. in the river six men, and at Poolbeg twelve. They catch, in the above time, from ninety to two hundred each week, which average in the market to sixteen or eighteen shillings each; this fishery extends from the weir at Island Bridge to the Light-house, Poolbeg.

SECT. 19. *State of education, schools, and charitable institutions.*

THE numerous and unbounded institutions in the city, reflect the highest credit upon the inhabitants. There is not in existence a spot of the size of the city of Dublin, where there is such unlimited munificence. The fostering hand of charity has been bountifully held forth, at a most critical and perilous period, to the poor; the citizens have been liberal even to profusion, in behalf of their suffering fellow creatures.

Dublin

Dublin General Dispensary.

A charitable and useful establishment, held at No. 28, Temple-bar, where medical and surgical assistance is administered to the poor, gratis. A physician and surgeon attend every other morning (except Sunday) to prescribe for and dress such patients as attend. There is likewise a physician and surgeon for each of the six city wards, to visit those who are unable to go out; it is supported by voluntary contributions. A subscriber of five guineas becomes a governor for life, with the liberty of always having one patient in attendance; and a subscriber of one guinea, becomes a governor, with the same privilege, for one year. The medical gentlemen of this dispensary have formed themselves into a humane society, for the recovery of persons apparently dead from drowning, suffocation, or other accidents.

Hospital for Incurables,

Founded by the Musical Society, who disposed of the produce of their annual subscription, at the close of each year, to such charitable purposes as the exigencies of the times required. On the increase of their fund they fixed on a more permanent method of applying it. They observed several unhappy creatures, labouring under disorders deemed incurable, whose cases excited particular compassion; they, therefore, resolved to apply their fund towards opening an hospital for the support of incurables, on the 23d of May, 1744. They thought
proper

proper to confine their institution to the reception of such incurables as were disgusting or offensive to the sight, and thereby provide a comfortable support for such, whose infirmities had rendered them proper objects for relief.

The undertaking met with deserved encouragement, and they were enabled to accommodate twenty-eight persons, which was all their house could at that time contain.

At length, the utility of the scheme met with the most liberal support, and a large edifice has been provided, near Donnybrook road, for their reception.

Mercer's Hospital, Stephen-street.

In 1734, Mrs. Mary Mercer gave a large house, at the end of Stephen-street, for an hospital for the reception of sick poor, and appointed governors and directors for the hospital. The ground, on which the house stands, being glebe, was given by Dr. Whittingham, then Archdeacon of Dublin. At the same time, the city of Dublin gave fifty pounds towards fitting up the house; and soon after, several contributions were made in aid of the undertaking. Against the 17th of August 1734, ten beds were fitted up for the reception of sick poor, and immediately filled. The physicians and surgeons, who were appointed governors, gave their attendance gratis, and several eminent druggists and apothecaries subscribed annually, towards supplying the hospital with medicines. The contributions were extended, and the
beds

beds were soon increased to forty. In 1738 they had further aid by a legacy from Captain Hayes, when the governors built a considerable addition to the house; the number of beds increased to sixty-two, which were kept constantly full. The number of out-patients, who receive advice and medicines at the hospital, have also increased yearly to near 4,200.

Besides casual benefactions, the annual subscriptions amounted to 140*l*. But the chief support of this useful institution, has been the benefit arising yearly from a musical performance at St. Andrew's church.

The governors were incorporated by act of parliament in 1750, by which they can legally recover legacies, receive donations, and purchase lands. By this act, the dean and chapter of Christ-church, and the minister, church-wardens, and parishioners of the parish of St. Peter's, are impowered to grant, in fee-farm, to the governors of this hospital, such part of their ground, contiguous to the house, as may hereafter be found necessary towards its enlargement. There is a clause in the act, to perpetuate the gratuitous attendance of the physicians and surgeons.

Charitable Infirmary, Jervis-street;

Opened the 12th of August, one thousand seven hundred and ninety-eight, the first of the kind ever established in Dublin, for the reception of sick and wounded poor, who are maintained, and supplied with all necessaries, and attended by physicians and surgeons, who also distribute medicines to such as there is not room for in the house. There is no distinction in the distribution of
this

this charity, but what arises from poverty and disease. There are twenty trustees chosen annually, who meet the first Friday of each month.

Charitable Loan.

The governors of the charitable musical society, incorporated by act of parliament), for lending out money, interest free, to indigent tradesmen, meet at St. Ann's vestry-room, every Thursday morning, at twelve o'clock, to receive applications from proper objects, to be relieved by this charity. Their recommendation must be signed by the minister, one churchwarden, and by one of four persons appointed in each parish, whose names are hung up in the vestry-rooms of their respective parishes. The recommendation must certify the name of the person, place of abode, occupation, number of persons in his family, that he is a master workman, honest, sober, and industrious; that he is not a publican, or retailer of malt or spirituous liquors, or concerned in combinations.

The money to be lent is not less than two pounds, nor more than five, to any one person, at any one time, for which he must give a note, with two approved persons joined in it, and to be payable in such manner as they shall appoint.

During the drawing of the lottery, the governors decline lending out.

Magdalen Asylum, Leeson-street;

Founded by Lady Arabella Denny, and opened the 11th of June, one thousand seven hundred and sixty-six, for
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the reception of such unfortunate females as had deviated from the paths of virtue, and, from a sense of guilt, and penitent for their crimes, were desirous of abandoning their evil courses. They are supported by voluntary subscriptions about 80*l.*, and a charity sermon about 150*l.*; collections in the chapel about 500*l.*; interest of 2,000*l.* about 80*l.*, and plain-work performed by the penitents, about 40*l.* per annum. There are at present about thirty penitents.

Bethesda, Lock Penitentiary, and Work-house, Dorset-street,

For the reception and employment of women leaving the Lock hospital, and desirous of returning into the paths of industry and virtue, opened the 19th of March, 1794. It has already afforded relief to 220 females, who must otherwise have gone on to perish, without the possibility of extricating themselves from vice and wretchedness. Many of these have been restored to their families, and more placed in services, to support themselves by honest industry, and thirty-eight still remain in the house.

This charity has been endowed by the generosity of William Smith, Esq. of Granby-row, with a chapel and other buildings, vested in the hands of five trustees, ministers of the established church. The net produce of labour amounts to more than 350*l.* per annum; all branches of washing, callendering, mangling, &c. are carried on, and employment is solicited. Several ladies of rank, fortune, and humanity, superintend this charity.

House

House of Industry, Channel-row;

Was partly founded for receiving such as were by age, sickness, or misfortune, rendered incapable of earning their bread, and for relieving the city from the clamours and impositions of sturdy beggars.

An act of parliament was passed in 1773, and a grant made of 4,000*l.* to carry this design into effect, and it is since supported by subscriptions, benefactions, grants from parliament, and parochial collections.

Poor persons of every description are always admitted into this house, whether young or old, that are in apparent distress; here they are lodged, fed, but not clothed, it being found to be productive of bad effects, many going into the house merely to be clothed, and afterwards disposing of them for spirituous liquors; they are now, therefore, obliged to supply themselves with this comfort from their own exertions, from shops kept for that purpose within the walls of the institution, and, by this means, are better clad than formerly.

The average number of poor annually maintained in this house, is 1718; last year there were 8020 admitted; those who are able to work are employed, and are allowed eight-pence in the shilling, with which they may buy additional articles of food, &c. from a shop in the house.

The articles of employment are spinning, knitting, shoemaking by women, callico weaving, carpentry, turning, making hair combs, making cloaths. The instructors of hosiery and callico weaving receive no salaries, but one-third of the earnings of the children.

The

The establishment of soup-kitchens, in the late perilous dearth of provisions, for the relief of the poor, branched out from this institution, and has, within these two years, been a means of saving the lives of thousands. The distribution of rice by government was also an effectual relief.

Lying-in Hospital.

This is an elegant piece of architecture, designed by Mr. Cassels, and is much admired for the beauty of its proportions. The founder, Dr. Mosse, a physician of Dublin, with the most liberal efforts—and even against avowed opposition and public clamour, erected this stately fabric for the purpose of relieving poor lying-in women, the first and only attempt of the kind in Ireland. There are about seven hundred females delivered here every year. His sole resources for this great and charitable undertaking, were lotteries, and the profits arising from the concerts and gardens, collections in the chapel, and public benefactions. The interior is well adapted to its several uses, and the chapel is particularly admired for its elegance. A charter was granted by the king, and, when the Doctor died, parliament bestowed a bounty on his widow.

Foundling Hospital;

Was founded in the year one thousand seven hundred and four, for the relief of the poor of the city of Dublin; but, by an act of parliament, passed in 1728, the old corporation was dissolved, and a new one erected, appointing governors of rank and fortune, together with the Lord mayor,

mayor, aldermen, sheriffs,¹ and clergy of the city for the time being. Fifteen or more of these are annually chosen, the first Monday after the 24th of June, to be acting governors. By this act they were to receive common beggars, and children of all denominations, above six years old, for which a fund was granted to the governors, arising from an estate of 113*l.* 2*s.* per annum, from a tax on all carriages plying for hire within the city of Dublin and liberties thereof, and from a tax of three-pence in the pound, according to the valuation for minister's money on all houses.

Since that, another act passed, that, from the 25th of March 1730, the governors should receive into the house, all exposed and deserted children of either sex; and, for further aid to support this, an additional tax of three-pence in the pound was laid on houses. This act changed the original design of the foundation, it being now an hospital for foundlings, except only a few indigent people, who are admitted by a general Board.

The act for receiving foundlings was designed only to extend to the children of the city of Dublin and its liberties, to which part the tax is confined. There is now no limitation to the number of children; all offered are received, from all parts of the kingdom.

The preservation of exposed children is a most laudable charity, which renders it of the utmost utility and consequence, as it rescues from destruction many infants.

The younger children, as soon as sent in, are suckled by nurses maintained in the house for that purpose, under
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the inspection of proper persons, and as soon as nurses in the country, with proper certificates, can be provided, they are sent out, where they remain until six years old.

When they are removed to town, they are instructed in reading, writing, and the principles of the protestant religion, and afterwards sent to the spinning school, &c. where they are inured to labour, till at a proper age they are put apprentices.

Hibernian Society;

For maintaining, educating, and apprenticing the orphans of soldiers, opened the first of January, 1765, by subscription, for twenty children, since which period there have been upwards of two thousand two hundred admitted to this time. Governors were appointed by charter, the 15th of July 1769. The Society meet the first Monday in November, February, May, and August, and a committee of fifteen meet the first Tuesday in each month, for auditing the accounts, and receiving applications for apprentices; and the second Tuesday in each month, for giving out apprentices, and admitting children.

Hibernian Marine School;

A marine nursery, was instituted by a number of gentlemen, in the year one thousand seven hundred and seventy-six, who formed a plan for promoting the service of his Majesty's fleet, by clothing a number of men and boys, and granting encouragement for them to enter the sea service. This enabled them to supply the King's navy

with 164 men and boys, making them useful members of society, many of whom might otherwise have been great nuisances. On peace being made, those gentlemen turned their attention to a more permanent advantage for the sea service, both with respect to his Majesty's navy, and the interest of commerce, justly observing, that nothing could contribute more to this purpose, than educating and taking care of the orphans of seafaring men, who either lost their lives, or were old or infirm in the service. These humane and politic considerations induced them to offer not only immediate protection and support to their children and orphans, but also education and instruction, to prepare them for that laborious and useful occupation, in which their fathers spent their lives and constitutions. For this purpose a liberal and voluntary subscription was raised, by which the society were enabled to open a house at Irish-town, for the reception of twenty boys, and, as their subscriptions increased, the number of boys was increased to 50, and afterwards to 60, and so on as their fund increased, they increased their school. In 1768 they took a lot of ground at the lower end of Sir John Rogerson's Quay, where they built the present house, calculated for the increasing number of boys, and in a more convenient situation for the governors to inspect them. This new building was opened in 1773, for the reception of the children: it contains on one side a chapel, and on the other side a school-room; the apartments are all well adapted to their different purposes, and are capable of containing two hundred children. This
building

building cost 6,600*l.* and was defrayed by parliament. In 1775 the society obtained a charter.

Orphan-house for destitute Boys, Prussia-street;

Supported by voluntary contributions; opened in 1793, for receiving, maintaining, educating, apprenticing, and bringing up in habits of industry, destitute boys, who have lost both father and mother, and are between the age of four and ten years at the time of admission. Subscribers of twenty pounds and upwards are governors for life; subscribers of four pounds are governors for one year.

Orphan House for destitute female Children;

Opened the first of January 1791, and supported by voluntary contributions, for receiving, maintaining, educating, and apprenticing, or bringing up as useful servants, destitute female children, who have lost both father and mother, and are between five and ten years of age when admitted; there are at present 120 in the house. Subscribers of 20*l.* and upwards are governors for life; subscribers of 4*l.* are governors for one year. The governors meet the first of February, March, April, May, June, November, and December, at the house.

*Masonic Female Orphan School, Gordon's-lane,
Charlemont-street.*

This institution was founded in May 1797, by Lodge 190. 15, and is supported by subscription, and an annual charity sermon. The Grand lodge of Ireland having thought proper to adopt it, the government of it, with the sum of 112*l.* 11*s.* was given up to their committee in March 1800, by the then treasurer, Mr. James Bruhn, St. Andrew's-street, at which time the Grand lodge voted the sum of 200*l.* out of their own funds, in addition to the above, and to aid the institution; and on the fourth of January 1798, the Grand lodge of Ireland came to the following resolutions:

*The Right Worshipful Walter Wade, M. D. D. G. M.
on the Throne;*

Resolved, that it is expedient that a fund be raised, for the purpose of establishing A SCHOOL for the education and maintenance of ORPHAN CHILDREN of FREE-MASONS.

On which a committee of the Grand lodge was appointed, and resolved to raise a fund, by contributions from the several warranted lodges in Ireland, of not less than ten British shillings annually, and, by subscribing among the brethren, and other well-disposed persons,
and

and an annual charity sermon; and that any lodge, paying the sum of ten guineas, shall be exempted from such annual subscription. Governors were also appointed, consisting of the Grand master, D. G. M., G. W., G. T., G. S., and the masters of such lodges as shall pay ten guineas, all for the time being, and that all persons, paying ten guineas, shall be governors for life; and any person, paying an annual sum of one guinea, shall be a governor so long as he pays that subscription.

There are now twelve female orphans of free-masons, lodged, dieted, clothed, and educated; and it is expected that, against the next winter (1801), the number will be increased to at least twenty.

When the funds become adequate to the undertaking, it is further intended to establish, in each province, institutions on the same principles.

Patricians;

A large and useful body of men, who contribute towards maintaining a number of orphans, destitute of friends and support. Every well-disposed person, that chooses, may belong to this society, on paying an annual sum of six British shillings. The committee meet every Monday, to settle accounts, at the Struggler in Cook-street.

Stranger's

Stranger's Friends Society;

Established in 1790; an institution formed on the most disinterested principles, to lessen the calamities of life; to afford relief to the deserving object; to snatch from the jaws of death the creature hurrying untimely to the tomb, the victim of cold, famine, and disease; for the relief of the sick and indigent of every description of religion, sect, and party. No other recommendation is required, than a sufficiency of evident distress. Any person may apply, or give notice of those, that he knows or suspects to be in distress; a visitor is immediately appointed, who comes at an hour unexpected, to be on his guard against imposition; he has ocular demonstration. If the distress is found to be real, and the exigency of the case requires it, present relief is afforded, and continued to the extent necessary. In the last year they relieved 2,284 families, including 5,244 persons, with the sum of 706*l.* 15*s.* 4*d.*

Their fund is exhausted, and the claimants increasing; every penny is laid out as soon as received.

Reduced Literary Teachers;

Was formed in March 1789, by a few literary teachers, for their support, and their widows and orphans. They subscribe each one guinea a year, but those paying ten guineas were for life exempt from all further

further charges. They have had three charity sermons, and have raised, by them and subscriptions, the sum of one thousand one hundred pounds, being in part of two thousand pounds originally proposed to be raised as the capital stock, the interest of which, and all other subscriptions in future, were to be periodically divided amongst the distressed literary teachers, and their families. They pay twelve guineas, annually, for a room, with fire and candle, to meet in. There are no more than fifty members, and their fund amounts, with interest and subscription, to but one hundred pounds a year. The sources and present prospects of the society are inadequate to the plan they proposed.

Society for the Relief of Sick and Indigent Room-keepers ;

Established in 1790. Mr. Rosborough has obligingly furnished me with the following account. The first subscription set on foot, was only two pence per week, or 8s. 8d. a year; the first year there was under twenty pounds received, which relieved an hundred and twelve families, many of whom would have perished, but for the timely aid they received. The evident good arising from this infant undertaking, induced the society to hope, that, if it was more publicly known, they would meet with aid from the humane and charitable. Plans of the institution were published, explaining the objects to be relieved. Distressed labourers, mechanics in sickness, indigent room-keepers, and persons

sons, who never begged abroad, having good characters for sobriety and industry; no distinction of religion to merit a preference. The society increased in number and usefulness, so as to render it impossible to receive the reports of the inspectors, and to appropriate relief to others. They, therefore, appointed four divisional presidents, and fixed their meetings on the four first evenings of the week, which is still continued. Once in every month there is a general meeting, to settle the affairs of the charity, receive the report of the funds, and appropriate relief for the ensuing month. They are supported by annual subscriptions, charity sermons, and casual donations; of the latter, Mr. Rosborough informs me, that near two thousand pounds a year has passed through his hands, and that there have been expended, for the last three or four years, from three to four thousand pounds, annually; the only expences to the society are, poundage to the collectors of subscriptions, printers bills, and secretary's salary (fifty pounds a year) with a few incidental expences. All other services are performed by the members gratuitously. The name of every object ordered relief is entered, the place they live, their number in family, state of distress, and sum given them, so that in one view the entire system can be comprehended. Mr. Rosborough calculated the number of persons relieved by the society, from its origin to the present time, and found that they exceed in number the present population of the city of Dublin. The sick poor have always been the chief object. In relieving them,

them, more than money was necessary; several benevolent apothecaries have given their attendance and medicines gratis. Mr. Rosborough suggested an idea, of subscribing from the society a certain sum annually, to the Dublin General Dispensary, and to send all their sick persons to that institution, which has been attended with the happiest advantages to the poor. The best possible advice is now given them, and medicines gratis. It is astonishing, that more don't fall victims to disease than do; in a cellar, a garret, or some wretched habitation, two, three, or often more families live, consisting of husband, wife, and children, for, where poverty is, there you will find children; the husband or wife takes a fever, the rest of their little family retires to a spot in the same room, until the event of his indisposition is known; if he has the slightest tendency to recover, the wearied wife, and perhaps children, steal a repose in the same bed with him, and soon contract the fever, which seldom fails to run through the inhabitants of the same house. Forty-three families were lately ill, in fevers, near Mr. Rosborough's, in seven houses, and in other places a great number more, independent of the room-keepers society. He has himself relieved upwards of 500 persons in fevers, within a month, and in almost every case he saw, imputed the progress of the disorder to the want of cleanliness, and accommodation. He has witnessed a husband, wife, and seven children, lying, not in a bed, for they had none, but on the dusty remains of a little straw, burning in fevers, with no other covering than a few rags.

rags. Straw would be a luxury, but they could not procure it. No fire—no food—no cooling draught—often deprived of reason, and those, who were not in that state, looking with an anxious wish for the moment that would seal them in their grave. He declares, this is short of what he has witnessed. But a short time ago, he saw a husband lying dead along side of his wife and child, and the survivors insensible of the mortality that had taken place; the very air about them impregnated with the foulest smells. To remedy this evil, he has often thought, that fever hospitals, in the outlets of the poorest parts of the city, would save the lives of hundreds, and prevent the progress of fevers amongst the lower orders of society. There could be houses fitted up for this purpose, at a reasonable expense, and the moment a fever was discovered, the patient should be immediately removed there; the purity of the air, with the comforts they would there receive, would be almost sufficient to recover them. A friend of Mr. Rosborough's said, if he would undertake such an establishment, he would give two, three, or four hundred pounds, towards carrying it into effect. He laments the proposition was not made to a person of more consequence and influence.* It has been said, we have soup establishments for the relief of the poor. The soup shops are, and have been useful, to such creatures as are able to resort to them for relief; but what relief do they administer to such objects as he has described? they have no friendly messenger

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* The scheme has been since adopted, by order of Government.

ger to go on an errand for them, nor would it be suitable to their state of health; other draughts would be necessary, which they could not procure, but through the society. A visitor sees *all their wants*, and appropriates such sum as he thinks necessary for the distress he beholds; he sees the *real state the poor are in*. If idle, they are stirred up to industry, by procuring employment. If in filth, it is removed, and cleanliness encouraged. If naked, they are supplied with clothes. He has a great objection to the plan, on which the soup establishments are conducted. They are too few to render them useful; instead of having but two, three, or four, in the city, he would have one in every parish; this would prevent the great inconvenience of contending with the crowds, that resort to such places; it is at the peril of the life of an aged person, or a child, that they obtain soup; and when they do, at such a distance, and bring it home to their families, they have not fuel to render it palatable to those recovering out of sickness. He has witnessed this himself, and deplores the melancholy state of the mendicants in this city, crowding our streets, with groups of mere infants in the train of a sturdy mendicant, paddling in dirt, cold, wet, and nakedness; they bring these innocents into the streets to excite compassion. They themselves may be able to contend with hunger, cold, and poverty, but the children are not. To obviate such a great evil, he would institute such an establishment as the present, or grant such aid to it as would accomplish the object; that would be, to carry relief to them in their rooms, or places of abode, and all those

those, that were afterwards found begging in the streets, compel them into the House of Industry. To his own knowledge, there are about an hundred and fifty, or two hundred professional beggars in the streets of Dublin; all the others are compelled, from necessity, to look for charity, and would be better pleased to receive a small allowance weekly, in their rooms, than look to the precarious uncertainty from the streets. It may be asked, how could such a scheme be carried into effect? He answers, easily and without expense; he could procure five hundred persons in this city, who could be depended upon, and would heartily engage in such an undertaking; suppose three or four were appointed to each street (where the greatest poverty is), they would be able to know what the nature of the distress was, that the poor were labouring under, and administer relief accordingly. After such a scheme had taken place, he would have the utmost vigilance used to remove the loathsome objects (and he says unworthy, for he knows them to be such) out of the streets; these are observations, that have occurred to him as necessary; his only object is the happiness of his fellow creatures, in which employment he has spent the most of his time already, and, he trusts, will the remainder of his days.

Fever Hospital, in Smithfield;

Is at present a branch of the Poor-house, and conducted under the same establishment; it was established, by
order

order of Government, a few months since, at the suggestion of Mr. Rosborough, and has proved to be of the greatest utility, having saved numbers from being hurried to an untimely grave. It is at present in contemplation to erect another hospital for the same purpose, in a different part of the town. Mr. Rosborough is preparing a general statement of the poor in Dublin, which he proposes to publish as soon as possible.

Dispensary for the Infant Poor;

Was opened on Tuesday the 25th of March, 1800, at No. 26, Exchequer-street, where advice and medicine is given gratis, three days in the week, viz. Tuesdays, Thursdays, and Saturdays, from three to four o'clock in the afternoon, to all infants and children under twelve years of age, without distinction or recommendation, in all medical and surgical complaints, infectious diseases only excepted, such as small-pox, measles, or hooping cough, for which they will be supplied with medicines, on an exact account of their situation being given, as it would be dangerous to bring such children to the institution.

Attendance will be given, during the months of April and September, for inoculating the children of the poor; and in the month of October, such children as bring certificates, from subscribers, of their parents inability to clothe them, will receive flannels to protect them from the cold of the winter.

About

About three thousand were relieved in the first fourteen months; subscriptions of one guinea a year, or any further donations, are received at the bank of J. C. Beresford, Esq. and Co.; by the Rev. Arthur M'Guire, No. 19, Sackville-street; J. Creighton, Esq. No. 3, St. Andrew-street; and Mr. William Lindsay, Foundling-Hospital; and by all the directresses, who are governesses of the Foundling Hospital.

Charitable Dispensary, No. 71, Meath-street;

For administering medical and surgical aid to the sick poor, and assisting them and their families with the necessaries of life, during sickness, and preventing the spreading of contagious diseases; opened November 1794; supported by annual subscriptions, and charitable donations, under the controul of the subscribers, and a committee, who meet every Wednesday night. All persons paying ten guineas are governors for life, and may have one patient constantly on the books; and such, as pay one or more guineas annually, are governors for the year, and may have a patient on the books for each guinea subscribed.

Externs are attended at their own houses, if within the parishes of St. James, St. Catherine, St. Luke, St. Nicholas-within, or St. Audeon.

There were admitted for relief, within the last year, four thousand five hundred and nine persons; and since the commencement,

commencement, to the end of six years (Nov. 1800) twenty-one thousand seven hundred.

Dispensary for the parishes of St. Mary, St. Thomas, and St. George, held in Denmark-street.

This charitable institution was the first of the kind established in Dublin. Medicines and advice are given thrice a week, at the Dispensary, or at their own dwellings, every day, if necessary, to such of the resident parishioners as are able to procure the common necessities of life, but whose age, complaints, or situation, render them improper objects for public hospitals. The expenses of this most useful charity are defrayed by private subscription, and public parochial contributions.

Blue-coat Hospital;

Was originally situated in Queen-street; it was founded in 1670, by the contributions of the inhabitants of Dublin, together with other benefactions. King Charles the second gave them a charter, with a grant of the ground, on which the building stands. It was at first intended for the reception and support of the aged and infirm poor of the city, as well as of their children; but the governors finding their fund was inadequate to the original design, thought proper, about the year 1680, to receive boys only; and from that time, as their revenues

venues encreased, they enlarged the number to an hundred and seventy, the present number; and the annual income, for their support, is about two thousand pounds, of which two hundred and fifty pounds are granted by the city of Dublin. The real estate is now near a thousand pounds, but in a few years, when the present leases expire, it will be considerably augmented. The remainder, being casual benefactions, cannot be exactly ascertained.

The children to be admitted, are to be sons of reduced freemen, except ten on the foundation of Henry Osborne, Esq. and twenty on the foundation of Erasmus Smith, Esq. besides two, whom the minister of the parish of St. Werburgh's has the privilege of appointing, agreeably to the will of Mr. James Southwell, who bequested four hundred and thirty-six pounds to the hospital. They are maintained, clothed, and instructed in reading, writing, and arithmetic, and when properly qualified put apprentices to protestant masters, and a fee of five pounds given with each. The corporation of merchants support a mathematical school in the hospital, for the instruction of ten boys in navigation, who are to be put apprentices to merchants, or captains of ships for the sea service. The children attend divine service every day regularly. It is observable, that the boys of this hospital generally prove sober, honest, and diligent apprentices, and many of them have become respectable citizens, which, no doubt, is to be attributed to their having been thus early instructed in, and accustomed to
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the duties of religion, and secured from the dangers arising from corrupt company, and the consequent vices in boys abandoned to their own discretion.

The beautiful new building, opposite Blackhall-street, which they at present occupy, has already cost twenty-four thousand pounds, and it is expected that it will take two thousand pounds more to compleat it, the steeple being now the principal object to be finished.

Charter School, near Clontarf.

A large handsome building, situated on the Strand, two miles from the castle of Dublin; an hundred boys are here lodged, clothed, maintained, and educated in the protestant religion, and employed in different branches of useful manufacture. The society give a portion of five pounds to each person they educate, of either sex, upon their marrying a protestant, with the previous approbation of the committee, and their producing a certificate that he or she hath duly served their apprenticeship, provided such claim is made within seven years after the expiration of the apprenticeship, and within six months after marriage.

Dublin Weekly Schools;

First established in 1786, under the name of St. Catharine's Sunday Schools, for the education of both
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sexes,

sexes, of all religious persuasions. At first, all who applied were admitted, the numbers increased, and they were required to bring a note from a housekeeper; notwithstanding, their numbers still increased, and it was judged necessary, that they should bring a recommendation from a subscriber. Even under this restriction the applications were more numerous than the accommodation would admit, though capable of containing six hundred children.

They are supported by annual subscriptions, and by donations in money, or useful articles for the scholars.

The subscribers meet once a quarter, and during that interval, a committee meet once a month, and adjourn occasionally. The doors are opened from eight to eleven o'clock, in the forenoon, and from three to seven o'clock in the evening.

The scholars are taught spelling, reading, writing, and ciphering, and are provided with books, slates, paper, &c. They are divided into classes, and are removed as suitable. The scriptures are read in the schools, but no catechisms, nor books of religious controversy are admitted.

Each class is under the care of one or more teachers, and if any of the scholars absent themselves without a cause, it is enquired into, and if they continue the practice, they are considered as dismissed, and their books taken from them. No improper persons are admitted to disturb them, nor are the scholars permitted to go out without permission.

Persons

Persons subscribing five guineas, are governors for life; those subscribing five British shillings, annually, may recommend one male and one female each week.

The masters are paid two shillings and sixpence, the mistresses two shillings, and the monitors and monitresses one shilling per week each.

The utility and necessity of educating the rising generation, who press after it with avidity, has particularly occupied the attention of those, who have observed its beneficial effects. The DUBLIN FREE SCHOOL HOUSE is now erected, and is capable of containing one thousand five hundred scholars, and is open to ALL, whose situation will admit of attendance.

Sunday and Daily School, North Strand;

Instituted in 1786, for boys and girls; the average number on the rolls, for some years past, have been two hundred and fifty. It is supported by subscriptions, charity sermons, and collections in the chapel; the profits, arising from work done in the school, are also applied towards the support of this institution. All proper objects are admitted, and many attend from a considerable distance. Admission is obtained on the recommendation of a subscriber.

Girls and boys are taught arithmetic, but not until they have made a considerable progress in the other branches of their education.

On the opening of the school, each morning, a short form of prayer is read by the master and mistress, and another in the evening.

County of Dublin, or Meath Hospital;

Situated on the Upper Coombe, was appointed the county infirmary, for the county of Dublin, by act of parliament, in the year 1774. It was at first instituted for the relief of poor manufacturers in the Earl of Meath's Liberty. It is supported by private subscriptions. Subscribers of twenty guineas become governors for life, and such as pay three guineas, annually, are governors for that year, having a power, at all times, when there is a vacancy, or upon any sudden emergency, of sending a patient into the house.

The number relieved by this institution proves its utility. For above twenty-four years past, it has supported, annually, from two hundred and fifty to three hundred interns, and relieved by medicine and attendance, last year, fourteen thousand six hundred externs.

Simpson's Hospital, Great-Britain-street;

Incorporated by act of parliament, in March 1780, and opened in November 1781, for the reception of poor, decayed, blind, and gouty men; the annual income is two thousand five hundred pounds, and it constantly

stantly supports thirty-six gouty, and thirty-six blind men; they are clothed, dieted, and lodged in the most comfortable manner that is possible, and every department in the house conducted with the greatest exactness and propriety. The agent gives 3,000*l.* security, and is allowed one shilling in the pound on all rents and interest-money, except the money vested in public securities, for which he has one per cent. The secretary has a salary not exceeding 50*l.* a year; there is also a house-keeper and a steward, under the best regulations that can be devised.

*Swift's Hospital, or St. Patrick's Hospital for Lunatics
and Idiots;*

Founded in 1745, by Dr. Jonathan Swift, Dean of St. Patrick's, and incorporated by charter, the sixth of August, 1746. The Dean bequeathed 11,000*l.* for this hospital. The trustees purchased an estate of 400*l.* per annum, and the fund has been since considerably augmented by legacies, but not sufficient for more than thirty-eight lunatics and idiots, and twelve more patients received as boarders, for the sum of thirty guineas each.

The men and women are kept apart from each other, by a division in the building.

Stephens's Hospital, Stephens's-lane, James's-street.

In 1710, Dr. Stephens, an eminent physician, bequeathed 600*l.* a year to his sister during her life; and after her decease, vested it in trustees, for erecting and endowing an hospital, for the relief and maintenance of curable poor persons.

Mrs. Stephens, soon after the Doctor's decease, purchased the land the hospital now stands upon. In 1720 she began to build it on a more extensive plan than the fund would support, but, by the assistance of several considerable benefactions, she was enabled to complete two-thirds of the building in July 1723, when the hospital was opened, and accommodations for the reception of forty patients were ready in 1724. An act of parliament was obtained in 1729, appointing twenty-three governors, and their successors, to be a body politic and corporate for ever, with power to purchase lands to the amount of 2,000*l.* a year, to have a common seal, to sue and be sued, and to grant leases.

A third of the hospital remaining unfinished, the governors opened a subscription, which brought in 1,400*l.*; and, as Mrs. Stephens continued to pay 450*l.* per annum, the building was soon completed, and rendered capable of containing three hundred patients.

They support in the hospital, constantly, seventy poor decayed house-keepers, tradesmen, servants of both
sexes,

sexes, and poor labourers, besides externs, who attend for advice and medicine.

The governors elect officers, &c. to continue during pleasure, and make bye-laws, rules, and orders, for the good government of the hospital.

The visiting days are Mondays and Fridays, and the receiving day Monday, at eleven o'clock. Persons under accidents are received at all times.

Nicholas's Hospital, Francis-street, united with that of St. Catharine's.

It was opened the first of April, 1753, and is capable of receiving forty internal surgical patients. Two skilful physicians visit twice each week, viz. Tuesday and Friday, and five surgeons attend alternately every morning, from eight o'clock to ten.

Every Monday, at twelve o'clock, is appointed for the reception of patients (sudden accidents excepted), each bringing a certificate signed by three subscribers.

Westmoreland Lock Hospital, Townsend-street,

For the indiscriminate admission of all indigent persons afflicted with the venereal disease; opened the 20th of November 1792. The hospital generally contains between two and three hundred patients, who are regularly attended by physicians and surgeons.

An

An establishment has been lately added to this hospital, for the relief of ruptured poor; the two senior surgeons attend every Wednesday and Saturday at eleven o'clock, to distribute trusses to such ruptured poor as may then and there apply.

Ouzel Galley.

As this society, though formed upon a different patriotic plan, terminates in charity, it may with great propriety be introduced under the list of charitable institutions. The design of this respectable foundation, is to determine commercial differences by arbitration, superseding the necessity of going to law, or litigating matters that are of little moment. This useful society applies the costs, that are decreed against the parties, to charitable purposes.

Rathfarnham Sick poor Dispensary;

Established the 25th of March, 1801, for the relief of the sick in the neighbourhood of Rathfarnham. Subscribers of one guinea per annum have a right of keeping one patient on the books, and, for every guinea, they have a like privilege. Any labourer, losing his work by sickness, has not only medical relief, but is likewise allowed three shillings per week during his illness

or

or incapacity for work, and they have proper medicines and advice gratis.

There is another charitable institution, supported with great spirit by the gentlemen of this neighbourhood, which is that of distributing provisions, viz. wheat-meal, oatmeal, herrings, &c. to the poor, considerably under the market price.

Confined Debtors.

——— Powell, Esq. has vested 800*l.* in the Lord mayor and aldermens' hands, from the interest of which a benefaction of a twelpenny loaf, a piece of beef, fuel, and 1*s.* 1*d.* in cash, are given on Christmas-eve to each confined debtor.

SECT. II. *State of absentee and resident Proprietors.*

THE following is a list of the principal proprietors, alphabetically arranged. Property being of a very fluctuating nature in this county, it is impossible to ascertain it perfectly.

Arthur, John,
———, Counsellor,
Ashbrook, Right Hon. Lord Viscount,
Avondale, Right Hon. Viscount,
Alexander, Alderman,
Aldermen of Dublin,

Annexley,

Annesley, Right Hon. Richard,
Armstrong, Major,

Beresford, Right Hon. John,
———, John Claudius,
———, Rev. Charles Cobb

Bolton, Captain,
———, Robert,

Butler, ———,

Beaver, Colonel,

Byrne, ———,

Brown, Sir John,

Baker, Thomas,

Beaulieu, Right Hon. Lord,

Bunbury, Mrs.

Crawford, Captain,

Cobb, Thomas,

Croker, Widow,

Connolly, Right Hon. Thomas,

Charlemont, Right Hon. Lord,

Cockburne, Major,

Chamberlaine, Judge,

Coote, General,

———, Charles Henry,

Caldbeck, Counsellor,

Carysfort, Right Hon. Earl of,

Clonmell, Right Hon. Earl of,

Courtney, David,

Domville, Pocklington,

Dublin, Archbishop of,

Dunn,

Dunn, Mrs.
 Dean of Christ Church,
 Day, Judge,
 Donoghmore, Right Hon. Earl of,
 Debutts, ———,
 De Vesce, Right Hon. Lord,
 Dwyer, John,

Ely, Right Hon. Marquis of,
 Evans, Hampden,

Farnham, Right Hon. Lord,
 Finlay, John,
 Forster, Hill,
 Fitzwilliam, Right Hon. Lord,
 Fauconberg, Right Hon. Lord,
 French, ———,
 Frankfort, Right Hon. Lord,
 Foote, ———,

Gormanstown, Right Hon. Lord,
 Grierfon, George,
 Gorges, Hamilton,
 Gleadowe Newcomen, Sir William,

Hayfield, John Arthur,
 Headford, Right Hon. Marquis of,
 Howth, Right Hon. Lord,
 Hutchinson, Sir Francis.
 ———, Mrs.
 Hamilton, Hans,
 ———, Alexander,

Jones,

Jones, Right Hon. Theophilus,
Johnston, Sir Allen,

Kingsland, Right Hon. Lord,
Knox, ———,
Kennedy, ———,

Latouche, Right Hon. David,
———, Latouche, David, Jun.
———, Latouche, Digges,
Lighton, Sir Thomas,
Lansdowne, Right Hon. Marquis of,
Leinster, His Grace the Duke of,
Longford, Right Hon. Lord,
Lees, John,

Miltown, Right Hon. Earl of,
Milton, Right Hon. Lord,
Manders, Alderman,
Meredith, Sir Richard Gorges,
Macartney, Sir John,
Mason, Right Hon. John Monk,
Moore, Ambrose,
Meath, Right Hon. Earl of,
Montjoy, Right Hon. Viscount,
Molesworth, ———,
Malone, Counsellor,
Magan, ———,
Mellifont, Captain,

Norbury, Right Hon. Baron,
North, Edward,

Perry,

OF THE COUNTY OF DUBLIN.

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Perry, Right Hon. Lord Viscount,
Palmerstown, Right Hon. Lord Viscount,
Palmer, Roger,
Pratt, Colonel,
Pierce, Lady,
Rutland, ———,
Plunket, ———,
Powercourt, Right Hon. Lord,

Ribton, Sir George, Bart.
Rochfort, St. John Staunton,
Roberts, Counsellor,
Rowley, Clotworthy,

Synge, Archdeacon,
——, Francis,
Shaw, Robert,
Steele, Sir Richard,
Somerville, Sir Mark,
Strong, ———,
Sayer, Richard,

Talbot, Mrs.
——, Colonel,
Taylor, Christopher,
Tennison, Thomas,
Trimlestown, Right. Hon. Lord,

Vesey, George,
Verschoyle, Richard,
Vernon, Captain,

Wilkinson,

Wilkinson, Sir Henry.

———, Abraham,

White, Luke,

Webb, ———,

Williams, James,

———, ———,

Wolfe, William.

SECT. 12. *State of Circulation of Money or Paper.*

IN March 1797, a run was made upon the National bank of England, in order to draw out the specie. In three days they so far succeeded in their attempt, as to get off eleven millions of guineas. Government immediately summoned a privy council, and stopped the issuing any more guineas, and in lieu thereof issued small notes. A similar attempt was made on the banks in Dublin, and a like remedy was immediately interposed, and they also issued a quantity of small notes as a substitute, to answer the currency of trade.

SECT. 13. *State of Farming or Agricultural Societies.*

CASTLEKNOCK FARMERS SOCIETY,

From the Rev. Dr. O'Connor.

Instituted the 27th of November 1797, for the improvement of agriculture, the rewarding and encouraging
faithful,

faithful, industrious, and sober servants, labourers, and others, employed in husbandry.

Every landholder, or inhabitant of the parishes of Castletown, Blanchardstown, and Porterstown, subscribing annually a guinea or upwards, shall be a member of the society.

On the 29th of January 1798, premiums were offered for the encouragement of agriculture and industry, to the amount of 61*l.* 18*s.* 3*d.*, not more than 16*l.* 14*s.* 9*d.* of which was granted, the disturbances of the following summer preventing claims from being sent in. It was then resolved, that the funds of the society, or such part as should be agreed on, be lent every year, interest free, to such persons as should establish a village shop, or shops, within the united parishes, furnished with such articles, as are generally made use of by labourers, manufacturers, and mechanics. Such shop or shops to be under the inspection, and subject to the regulations of the society.

The number of members are about forty, and the subscriptions from a guinea to two guineas a year.

The society foreseeing a dear season, in the beginning of 1799, opened a subscription to purchase provisions and fuel, to be sold out to the poor at reduced prices.

Observations, from Dr. O'Connor's Account.

There is no calculating the beneficial effects, that might result from the general establishment of institutions,

tions, similar to the Castleknock Farmers Society.* It proceeds upon the true principle, "that the most effectual way of promoting the improvement of the condition of the labouring classes, is to set them to work at it themselves." It combines with this principle a due attention to the improvement of their morals, and the education of their children, and tends to promote a friendly intercourse between the different classes of society, and to render the rich better acquainted with the wants and the merits of their poorer neighbours. The principles, on which it is founded, may be modified into a variety of shapes, and adapted to particular circumstances.

Farming Society, under the Patronage of the Dublin Society, established in March 1800,

RIGHT HON. JOHN FOSTER, PRESIDENT.

The object of the Society is to improve the agriculture and live stock of the kingdom, and to encourage the best modes of breeding, upon the plan of societies in different parts of Great Britain, by offering premiums for the best bulls, cows, heifers, rams, ewes, swine, &c. &c. which may be exhibited at the fair of Ballinasloe in the month of October, and for the best fat cattle and sheep exhibited at Smithfield in April and November each year.

A subscription

A subscription of one guinea entitles any person to become a member of the society, for one year; and a subscription of ten guineas constitutes a member for life. They are admitted by ballot.

STANDING COMMITTEE.

Marquis of Sligo,
Sir Edward O'Brien, Bart.
Sir John Freke, Bart.
Owen Wynne, Esq.
Richard Reynell, Esq.
Rev. Richard Wynne,
George Grierfon, Esq.
Richard Aldworth, Esq.
James Harvey, Esq.
Right Hon. David Latouche,
Rofs Mahon, Esq.
Robert Wynne, Esq.
Charles P. Doyne, Esq.
Robert St. George, Esq.
Rev. Doctor Beaufort,
Henry Stewart, Esq.
Sir Wm. Gleadowe Newcomen, Bart.
John Garnet, Esq.
Samuel Garnet, jun. Esq.
Gerald O'Farrel, Esq.
John Hamilton, Esq.

Secretary, Agent, and acting Treasurer,
Mr. Charles Mills, 44, Cusse-street.

Subscriptions are received by the Treasurer, the Secretary, and by the members of the committee.

SECT. 14. *State of Manufactures, whether increasing.*

THE woollen manufacture is in a progressive state of improvement. The machinery, that has been introduced latterly, has done more for the advancement of this business than any thing, that could be hitherto effected, and we may now reasonably conclude, that with a little assistance it will make great progress. The grand obstacle is removed, which was the establishing of machinery; combinations had prevented this, to the great loss of individuals, but these contracted ideas seem no longer to exist amongst the workmen.

The number of pitch marks upon the Irish wool, is much complained of by the manufacturers, as a great loss. The English are allowed to put but one mark.

Woollen Manufacture.

The following memoir, on the growth of wool, was communicated to me by that truly patriotic manufacturer, Mr. Nixon, of Chapel-izod; most of it was originally written by him in 1784, and addressed to the Right Hon John Foster. He informs me, that it contains the most certain and expeditious mode for the improvement thereof, and that there is no doubt, when it becomes

becomes generally known by gentlemen of landed property, who may wish to establish manufactures upon their estates, but many will adopt it. He wishes me to make such use of it, as may promote its interest, as also of his name; and as to any further enquiry, which any friend to the country may think proper to make, and even as to his personal attendance, if necessary, he is ready to contribute his share.

He remarks, that in some branches of the woollen manufacture, wages are rather higher in Ireland than in England. But as machinery gets forward in Ireland, which is already, in many places, established, it will very soon bring the labour of both countries upon an average.

Observations on the Growth of Wool, by Mr. Nixon.

“ Being no longer restrained in exporting from this kingdom every species of Irish produce and manufacture, we should now look forward, and take into consideration, that to avail ourselves of this acquisition, we must become as perfect as they, with whom we have to contend, e’er we can expect to dispose of our produce, to equal advantage, in any market.

No objects are likely to produce greater advantages, than manufactures of our own materials, nor is any subject of greater importance to us than that of our wool.

Of this, the noblemen, gentlemen, and farmers, may be said to be the manufacturers, and it is of more general importance, that it may be made more perfect from

their hands than it is, that the multitudes, who depend on it for support, shall exert their skill to render it so through its subsequent operations; for without the first requisite is sufficiently attended to, their skill can be of little effect.

I am inclined to think, that this may be read with some degree of curiosity and surprize, that a mechanic should thus address a grazier, pretending to give information, where the professions so widely differ; but if the manufacturer can furnish the grower with useful hints, and such as can only be supposed to arise from practice and experience, in working upon the material, and which a farmer may well be supposed ignorant of, he will no longer be considered as assuming what he has no pretensions to. It is a subject worthy of an able pen, and I shall be glad to see it taken up by such, that it may not suffer in its consequence from inadequate language to give it weight.

It is known by all, that the woollen manufacture of Ireland will admit of, and requires considerable improvement. The superiority of English manufacture accounts for the immense importation of it into this kingdom, under the disadvantages of increased expense in the articles, carriage, freight, and a duty of sixpence per yard, which, upon low priced goods, should be a prohibition; notwithstanding which, they undersell us, even in our own market, so considerably, that all the exertion of an enraged populace to destroy it, or encouragement offered, from time to time, to improve that
manufacture

manufacture at home, has hitherto proved to be ineffectual to prevent the importation.

There is more to be done than barely to improve the manufacture; we'll begin with the raw material, wool.

Wool, in the fleece, is classed under two heads or denominations, the one combing, or long stapled; the other clothing, or short stapled wool; each fleece, when sub-divided, produces different degrees of fineness, in both classes. And some fleeces produce wool, which may be used in either (but unprofitably); hence proceed all the different qualities of manufacture, which we see made of wool, and after these sorts are separated by the wool stapler.* The manufactures of the combing, and of the clothing wool, are a distinct business, as those of silk and wool. Of combing wool is made *worsted*, and of it serges, poplins, stuffs, calamancoes, stockings, &c. And of clothing wool is made yarn, and of it broad cloth, frize, blankets, &c. And of yarn and worsted, when manufactured together in the same web, are made cassimeres, drugget, carpets, &c.† The farmer being
fo

* The wool-stapler is the person, who separates the fleece into its different degrees of fineness.

† Let this idea strike you, and you'll better understand those distinctions, when you conceive that in goods, made of worsted, the excellence consists in having as *few as possible* of the ends of the wool lying out of the stuff. And in goods, made of yarn, the excellence lies in the *greatest quantity* of the ends of the wool being brought out on the surface, having regard to the texture. From which it is to be concluded, that the finer and shorter the wool is, that is used in cloth, the greater number of ends of wool may be brought to the surface,

so far informed of the nature and process of wool, the subject of this shall be to shew the necessity of growing the materials as pure as possible, to answer those several purposes, and it must occur to him, if I should proceed no farther, that the more fit any commodity is for the consumer's purpose, the higher will the value be rated by him. He, the grower, has hitherto more to attend to in the management of his flocks, than what is generally understood by him of merchantable wool; when he conceives that it is so, if free from sand, yolk, and mat.

Before he can well understand how to apply the remedy, he should be informed of the complaint, that by stating the consequences to the wool, from improper management of his flocks of sheep, in the instance of feeding and mixture of sorts, the reader may judge, if it be worthy of attention and amendment.

Until late years, the general quality of the wool in this country (particularly in the province of Connaught) was a fine-haired wool, produced from small sheep. When large English rams were imported, they were bought up greedily by the graziers, at an extravagant price, under the idea, that by increasing the size, they must of course increase the quality of the wool most in demand, regardless but, I would rather say, inattentive to the quality or the consequence, which in one instance is,

that

face, without robbing the thread of sufficient substance, and which gives a rich downy feel and appearance to cloth: besides, the greater number of small parts a thread is composed of, the greater strength and permanency it will have.

that wool before that time was of one kind (or mostly so throughout the province of Connaught) pure and uniform. This introduction, for a time, produced wool of a mixed nature, which properly could not be termed either small or large, inclining fast to the latter; the hair becoming coarse, which, by degrees (as attention had been given to increase the size of the sheep) also increased the length, so that now it is become so general, that a sheep of the original Irish kind is rare, if at all to be found unmixed throughout the kingdom.

Combing wool has been mostly in demand in this kingdom, of late years, which induced the farmers to run rapidly into that breed of sheep, which was most likely to produce it. Worsted could be exported, and manufactures of it were much worn at that time. But as cloth could not heretofore be exported, and English cloth manufacture was cheaper, and more esteemed in our market, than what was made at home, this caused clothing wool not to be so much in demand, or rather not so many or extensive buyers were for it as for combing.

The woollen cloth manufacture is the staple trade of England, and the great object of the people; they are arrived at such perfection in it, as to rival all other countries in foreign markets. Minute attention is given by them to every particular of the business, and particularly to the growth of wool for clothiers use. Observe their management in it, you will find throughout England a great variety of sheep; some are large, some small, horned, and without horns. Some flocks are all
black

black-faced, others all pure white; yet these different kinds are distinct, and kept apart from each other. And if great attention was not given to this, it is not to be presumed, but that we should find there, as with us, a mixture of all in the same flock, large, small, and mottled. If the consequences show, that *they* are right, *we* must be wrong; and whilst we remain inattentive to this great object, of *keeping the sorts distinct*, it is in vain that freedom of export is given to us for vending of woollen cloth, unless we can find a market where English cloth does not appear. And I venture to pronounce, that, if this is not attended to, and corrected, whoever was the first person to introduce into Ireland the large English rams, could not more effectually injure our manufactures from wool, were he intentionally commissioned to effect so baneful a purpose.

Hitherto, I believe, the farmers have not discovered any error, and it may be hardly well understood by them, that they have erred, seeing that so far from being mistaken, all which they proposed has come to pass; for the quantity of wool and size of sheep are both increased; nor did the price or demand for a considerable time diminish, in consequence of change in quality. But let them reflect, what the quality of wool most in demand was, and whence that demand originated. Was it not that the English, on account of their export trade, had a greater call for worsted, than what the produce of their own country could supply? They well know, that the buyers of Cork have regulated our market, who look
for

for combing wool to supply that call; and the price, they give for it, is in proportion to the orders they receive from England. The low price of the spinning of worsted in Ireland enables the comber to pay a high price for wool, which hitherto only lasted with the great demand from England; and how much wool has decreased in value, when those orders for worsted slackened, has been experienced of late years.

By this regulation of our woollen market, the clothier was necessitated to pay the price, which combers made, and that too for wool not fit for his purpose, when, at the same time, in England, the clothing wool rated from three to four shillings a stone under the price given here. Can this be continued, and can we sell our cloth on equal terms with the English? not unless the other branches of the manufacture rate proportionably lower here, which, like the spinning of worsted, shall bring this in. But this is not the case, as will be shewn on a future occasion. Before this mode of disposing of our wool, whilst there was no preference given to our home-made manufactures, and no export trade, such was the redundancy, that large quantities of wool are said to have been smuggled into France, the imports being encouraged thereto, by a bounty from the crown, of two shillings and sixpence a stone. But it is now a received opinion, that this mode of disposing of our wool ceased, when the demand from England, abovementioned, gave better encouragement.

Seeing

Seeing then, that, until now, we have had no branch of manufacture, at home, of consequence to regulate our wool market, shall we now depend upon this uncertain call, and deprive our poor manufacturers (even of worsted) of their support from the subsequent branches, by sending it in that unfinished state out of the kingdom? Or should we even confine our views to that manufacture, now that our ports are open, with abundance of poor about us in need of employment? I believe it would be impolitic and unjust. But I will not dwell longer upon the worsted line of the manufacture, which will get forward in Ireland, in all its branches, now that we can export, and I have already said that there is material enough to work upon; but my purpose is to shew, that it is equally our advantage to attend to and forward the woollen cloth manufactory, as the other.

I have heard, it has been observed, now that combing wool is become the staple of the country, that we should follow that line, and leave to England theirs, the cloth manufacture. Of this I should approve, provided, that they, in consideration thereof, would relinquish their worsted manufacture to us. But in this exchange, we must also exchange the wool with each other, for each business. For neither country is, throughout, of quality to produce *good wool*, of the one sort only; neither is it necessary, that either country should be confined, since they are both extensive enough to establish each branch perfectly distinct.* Therefore, as we have equal advantages

* Exactly suited to Union.

tages in situation, and means to produce our own materials, in both classes, let us rather endeavour to make them perfect, and ensure to ourselves an extended even trade, affording to each concerned a certain and good return of profit. Let me revert to the observation, that the English, in a great measure, supply our market with cloth (not Spanish alone, but produced from wool of the growth of England) notwithstanding the many difficulties they encounter; and they must continue to do so, if we do not grow wool in Ireland equal to theirs; and if we find, that they continue to have this advantage over us, 'tis in vain to expect any market abroad, whilst a cloth of theirs remains unsold; for preference will ever be given to the cheap and good.

That we can produce *good clothing wool* in Ireland, is as certain, as that we do the combing wool, from this known fact, that thirty years ago, in the province of Connaught, many graziers could produce, at the fairs, from ten to twenty bags in a parcel, which turned out wool as uniformly good in the clothing, as now it is more inclined to the combing. I have counted two hundred and ten fleeces, from one bag of wool, containing forty-five stone, of which one third were firsts, one third seconds, and the remainder thirds.* The first sort produces wool as fine as that of any country, the others in proportion. After the English sheep were brought over, I continued to buy the same parcels, and experienced, year after year, the variation, until that
 wool

* Terms which are used by the stapler to denote the quality.

that wool, which they still termed clothing, became so large and coarse, that instead of 210 fleeces in a bag, of 45 stone, they contained but from 150 to 160, without one first-rate fleece amongst them, very few seconds, and perhaps not one-third of those fit for either a clothier or a comber, being of a mixed adulterated quality, too long and coarse for clothier's use, and too short for the comber. But even such wool must have a term given to it, to sell it by, and because not fit for a comber, they stile it clothing wool. What is much to be lamented, is, that such is the produce at this day of those grounds (I presume in no wise altered in quality or nature), which formerly produced such as I have related.

I hope to have been understood, that I recommend to have the large and small sheep kept distinct, and it also appears to me reasonable, that the size of stock sheep should be proportionable to the pasture; and quere, if it would not better to reward the farmer, for having a greater number of small sheep, well fed on the light kindly sheep-walk, than a lesser number of large ones on the same ground scantily. But I shall advance no further into a field, which is the province of others.

To adhere to my intention of only making such remarks as have occurred to an inquisitive manufacturer, who takes upon him to account for causes, when he sees defects, I must further observe, that, when a fleece of wool comes under the inspection of the wool-stapler, he well knows whether or not the animal was sufficiently and well fed; for the wool of a small sheep, if fed upon
strong

strong ground (I mean, such as does not go under the denomination of good sheep-walk), will prove coarse, although short; and the wool of a large sheep, if fed upon land, which, properly speaking, would only feed a small one, may be long, yet poor, and insufficiently supported to carry strength for its length. I believe, indeed, that the increase of tillage, and improvement of land, has enabled us to feed a greater number of large sheep, than was the case at the time mentioned; yet enough of land, in its original state, remains, to grow a great quantity of fine wool, and pay well, which it would not in any mode of tillage. Another remark, which comes under the observation of the manufacturer, is that defect in wool, which is called the second growth, which is a decay or rottenness in the middle of the hair, although both top and bottom shall be sound, which, in working, breaks off at that part. This is accounted for by bad wintering. From the time of shearing to the coming on of winter, the sheep may have been well fed, but, if it be not sufficiently supported afterwards, it falls off, and a temporary decay comes upon the wool. If the animal survives, and is brought forward again in the spring, the wool, which afterwards shall grow to the time of shearing, will be sound, but the injury, which the former growth had received, still continues.

When a sheep dies of any complaint, which it had lingered under, the growth of wool, before such complaint came upon it, shall be sound; but so much as
grew

grew, while the animal was disordered, will be found to be weak and bad, and to waste in the working.

I shall not say, that the introduction of large rams into Ireland was in general injurious, except in the instance of suffering them to mix with small sheep, and, from a mistaken notion of their superior quality, giving them the preference upon all soils throughout Ireland. Nor do I say, that all long stapled wool is coarse in consequence of being long; there is as much distinction in the fineness of the hair of wool fit for combing, as in wool fit for clothing; and as combing is to the full as necessary a branch of the woollen manufacture as clothing, so to grow the wool fit and pure for each, is equally of importance. But, comparatively speaking, farmers might as well sow wheat or flax on land, which would scarcely bring oats, as to expect good wool off large sheep, fed on a soil insufficient for their support. They may exist on it for the time that the wool is growing, and, when put upon a better soil, become fit for the butcher; but the wool, that has received an injury, is not to be brought back again by high feeding.

I presume, that not any thing is here advanced, which will not stand the test; those hints may bring forward a more experienced advocate to enlarge upon the subject, and convince the grazier, now that we may export (if we be wise) our manufactures, that it is his interest, reciprocally with the manufacturer, to do his part, and improve

improve the growth of wool; *he* must do so, or the other labours in vain.*

If, throughout, proper means are pursued, no doubt but the demand will be equal to all the wool, which we shall be able to grow and manufacture; nor will it cost us much pains to become perfect in the manufacture of GOOD WOOL, for, if we content ourselves only to copy, and will take that pains at once, we can be possessed of the improved modes of English manufactures, and set forward, with all advantages, in that trade, which they for ages have been labouring to make perfect.

It is therefore submitted most humbly to the wool-growers of Ireland, to consider how great the object, and how particular the attention of the public is, to that immediate line of business, WOOLLEN CLOTH MANUFACTURE, in which, no doubt, they conceive, great advances will every day be made. But if the information I presume to offer, be well considered, and received by the growers, so as to improve the wool of Ireland, they may be well assured, that the demand will increase for every species of the woollen manufacture, in proportion as improvement shall be made in the material to work upon. But to give more weight to my argument, than any other consideration, let it be remembered, that clothing wool (if good) must be held in the highest estimation.

* The Right Hon. William Burton Conyngham imported Spanish sheep, and, by attention to them, sold their wool (until he sold off his stock at Slane Castle) at a price little short of what it would bring immediately from Spain.

estimation. Therefore, let those, who have grounds fit for small sheep, endeavour to come at the best kinds, which produce clothing wool, with more eagerness than before now they took pains to banish them."

I have given this excellent account of *wool*, at full length, from Mr. Nixon. The importance of it deserves the greatest attention from every well-wisher to Ireland. I now proceed to give his sentiments upon the manufacture of the wool.

State of the Woollen Manufacture of Ireland.

"In attempting to account for the defects in the woollen manufacture of Ireland, the conduct of the English is never to be lost sight of. If it is asked, why we do not manufacture as cheap, and as well as they do in England? I answer, that wool, the growth of Ireland, though not so fine as that of England, is dearer in its price, which I attribute to the great exportation of bay yarn to England, the spinning of which is so cheap, that we may be almost said to export the raw material. Only a few in Ireland reap benefit from this traffic, and the great profit of finishing the manufacture remains with the English; besides, the wool of England is kept at nearly an average price, by prohibiting its exportation. This subject requires much consideration. Another cause of superiority is, that the English use more
machinery

machinery than we do, which saves labour and expense. Their workers are better regulated, and their experience and success has excited emulation, and introduced methods much superior to what are practised in Ireland.

Whilst our wool is in that manner drained away, we cannot expect to supply ourselves with sufficient cloth from Irish wool, unless the quantity shall be so increased as to supply both demands, and, in the mean time, the poor of our country (who are mostly the consumers of our own growth of wool) must pay, in the purchase of the manufactures, a price equivalent to counteract the exportation, to keep enough at home to clothe themselves.

With a view to increase our woollen cloth manufactory, and insure it a preference, it is proposed to lay on all species of broad-cloth a duty of 2s. 6d. per yard. Were no more than a preference required, it might be reasonable; but the duty demanded amounts to a prohibition, which prohibition, should it take place, would certainly be found to retard its progress to the perfection of the English; and, for want of competition, we shut ourselves up, confined to our imperfect and bad habits, and add strength to combination, gratifying those, who have merely personal or local views, and obliging the nation at large to pay dear for goods unskilfully manufactured.

Where is the necessity of a protecting duty? Is it not sufficiently apparent, that, notwithstanding the great importation of English goods, we work up and dispose (under all our disadvantages) of whatever Irish wool is

left in the kingdom from year to year, and the whole amount, of both the goods bought in, and those made at home, are for our own consumption. If the fact was, that we had a redundancy of wool, occasioned by being supplied with the manufactures of England, then we should look for the means of disposing of it, by encouraging the manufacture at home. As to Spanish wool, cotton, and articles, of which the raw material can be obtained upon equal terms with another country, and that labour can be had as cheap, there can be no bar to equality, if the same machinery and methods of manufacturing are adopted. These are well known to many amongst us, of the woollen branches, or may be easily come at; and prosecuting this plan (the necessities of life being in this country to be had upon as good terms as with our neighbours), those species of manufacture should get forward, by granting some small encouragement for a time, to counteract the long credit given by the English, and flourish in this country.

But if we would equally succeed in manufactures from wool of our own growth (to which subject I mean to confine myself), our object should be, not only to discourage any traffic, or mode for raising the price of the raw material, or losing it by exportation, but, by the most assiduous attention, to encourage and promote the improvement of the quality, and also the increase of the quantity. Until then it is in vain to expect to be able to stand a competition in our own market, much less to export, except, as before said, to the injury of the individual ;

vidual; and all exertions, by non-importation agreement, or other more violent means, to prevent the importation of that article, which is almost a necessary of life, will prove, as heretofore, ineffectual for permanent national utility.

Under proper regulations, notwithstanding the present state of our wool trade, much may be done, and, if we cannot export upon terms to meet the English in foreign markets, our contracted trade may be so far improved, both in quality and price, as to render the Irish market no object of moment to the English manufacturer. For this purpose I shall state the practice and present establishment of the woollen manufactory of both countries, that, by pointing out in what we are defective, and in what respect they have advantages, it may lead to what courses we should pursue, to be upon terms with them; preparatory to which, I shall make a brief statement of the modes, and establishment of the manufacture in Yorkshire, to compare with that of Ireland, being, for the most part, the manufacture of wool, the growth of the country, and of that sort of fabric, that would be best adapted to the Irish trade; and also, because their artificers are more dispersed than in any other manufacturing parts of England, is a circumstance desirable in this country, as the object could be easier effected, and the people be less apt to get into combination. Preparatory to which it must be considered, that the woollen cloth manufacture consists of such variety of branches, all requiring great skill and attention, that to go through the

whole process, is more than the same person should undertake; and the evil consequences attending the carrying on in a city any great manufacture, wherein a vast number of hands must be employed, are daily felt in Dublin, and are more than I shall attempt to enumerate. I shall only say, that combination, which is the first and great bane of manufactories, will ever be the consequence, where multitudes are herded together, and inducements to dissipation are many and frequent. The mode effectually to break through the present combinations, prevent them in future, and, at the same time, to add comfort to the handicrafts, are, in the annexed scheme of establishing a woollen cloth manufactory, the great objects of these considerations.

The Comparison with England in practice of Manufacture.

ENGLAND; WOOL-STAPLERS.

THE wool-staplers in England are persons, who follow a distinct business, between the grower of the wool and the manufacturer; they buy from the grower in the fleece, sort it into its different parts, or degrees of fineness, and retail those to the manufacturers, in such proportions as they may have occasion to purchase.

The poor manufacturer buys his small quantity on the same terms as the rich, and supplies his immediate wants, without being incumbered with more than he has occasion for.

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By this accommodation, he can confine himself in the manufacture of such cloth as he has laid himself out for, and his conveniencies are adapted to; and, as those woollen staplers reside for the most part where cloth-halls are established for the sale of the goods, the manufacturers are accommodated with wool (and other matters of convenience) without additional expense, or loss of time, when they attend the cloth market.

IRELAND; WOOL-STAPLERS.

SUCH as buy wool from the grower, and do not manufacture it, style themselves wool-merchants; they, for the most part, sell again, in the same manner that it is in the fleece. It is the desire of the clothier to buy in the fleece, because he is obliged to pay extraordinary dear for sorted wool. The clothier, for the most part, sorts for himself, and goes through the whole process until it is fit for the consumer. Clothiers, who are able to purchase a large quantity of wool in the fleece, buy from the grower, and dispose of such sorts, as they do not make use of themselves, to inferior clothiers, at considerable profit, but do not so much sort wool to sell as wool-staplers, as to get out of it what immediately answers their own purpose. Thus, the rich clothier, who buys the fleece, has great advantage over the poorer, who buys sorted wool; for they, who purchase only a small quantity in the bag or fleece, must have, of necessity, a great variety of sorts in that small complement of wool, a great
part

part of which, not being fit for his general line of business, and which has cost a considerable part of his stock, becomes a dead article, and he is either under the necessity of disposing of it again, or, in failure of sale, to work it up himself, which throws him out of his line of business, or forces him to a mixture of sorts, to the injury and discredit of the manufacture.

ENGLAND; ROUGH-CLOTH MAKERS.

These are clothiers in the first stages of the business, who are dispersed through all the clothing counties in England.

They buy their wool from the wool-staplers, manufacture it at their own dwellings, and sell it at the cloth halls, when milled. They, for the most part, hold sufficient land to afford them the maintenance of a cow and horse, with a garden for vegetables, which they till themselves. They are all reared to the manufacture of cloth, in which the whole family are engaged, and if they are not sufficient themselves, they hire servants to card, spin, or weave.

The use of a horse is to take their cloth to the mill, thence to the hall, and return with wool and marketing.

As a small capital will set up a rough-cloth-maker, so they are very numerous, but all dispersed through the country. As every rough-maker has within his own family, and under his own eye, the several operations of dyeing in wool, scribbling, spinning, and weaving done,
and

and his return of profit depending upon the quality of his cloth, when finished, it is to be presumed, that he endeavours to bring it to the same stage, in which he sells it, as perfect as he is able; and as he lays himself out to make but one sort of cloth, in which his workmen are practised, he can the easier succeed in good manufacture; and as his cloth must undergo a close inspection, before it is paid for, and large deductions are made for defects, or returned upon his hands, this is another tie to insure good work. In those branches, the least of the family can find employment; they are initiated and kept to industry from their infancy; as by this mode of doing business, all advantages, which the manufacture can afford, center within themselves, together with the helps from their little farm, they work cheap, and find comforts, which others are unacquainted with; and being thus dispersed throughout the country, they have not the same opportunity of assembling as those in towns and cities, to form laws or regulations of their own, which are found ever to be the great bane of manufactures.

IRELAND; ROUGH-CLOTH MAKERS.

There are very few in Ireland, who are rough-cloth makers professedly. A few do occasionally send rough cloths to Dublin, to be disposed of in that state; but, as the attendance upon the sale is expensive and uncertain,

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the practice is discouraging. The clothiers, for the most part, go through the whole process; they give out the wool, after they have prepared it, to a master, or undertaking spinner, to whom they pay so much per skain for spinning. This person employs hands under him, and undertakes spinning for every one, who will employ him. He receives a variety of work, some coarse, some fine, some white, some coloured, upon which his hands (or those employed by him) being occasionally changed from one to another, cause an unevenness, which is prejudicial to the manufacture; and as the undertaker's emolument depends upon the quantity he can get done for least money, the scribbling branch (which is extremely material) is, for the most part, slighted, and badly executed. The clothier gets home the spinning, and then gives it out to an undertaking weaver, who is paid so much per yard, according to the fineness. Those operations being done out of the clothier's sight, and none of those undertakers being persons of property, and generally in strong combination together, no recovery can be had for neglect, or bad work, in any of those branches, and the master clothier must receive it in whatever state they please to bring it home. From this practice it may be conceived, that neither cheap nor good manufactures can be obtained in the first stages of the business, which are the ground-work.

Those things I have several years since represented to the Dublin Society, and they recommended country manufactures, as the best and only cure for the evil, but,

as

as yet, the proper mode has not been struck out for the permanency of them there.

No mode appears to me so likely to extend the woollen cloth manufactory into the country, and to prevent combination, as to induce, by proper encouragement, persons that know the first stages of the business, and will engage to practise the most approved methods, to carry on the manufacture, as in England, from the wool, and dispose of it in that rough state, to which a safe repository for their goods, and a certain and speedy return, would be the greatest inducement and security for their proceeding with success, by means of an established cloth-hall.

I recommend this mode, because a very small capital, 20*l.* or 24*l.* will set up a rough-cloth maker*, and not less

* The expense to set up a rough-cloth maker with requisites for working, is nearly as follows :

A small iron pan, to scour and dye wool,	£.5	0	0	
A scribbling frame and cards, computed	-	0	15	0
Four or five spinning-wheels and spindles, at				
3 <i>s.</i> per wheel, - - - -	-	0	15	0
Warping bars computed, - - - -	-	0	10	0
A loom and tackling, high rated, - -	-	8	0	0
	£.15	0	0	

And, for wool for his first piece, about five pounds, so that for twenty pounds a rough-cloth maker may be set at work with one loom. Indeed, he should have more wool than is the complement for one piece, to employ his workers upon, until the first piece is either disposed of, or that he shall get some return upon it when sent to the hall for sale, and thus it would, in the whole, amount to about twenty-four or twenty-five pounds.

less than 300*l.* will set up a clothier, who goes through the whole process, and that in a confined way; there is a certainty of the one being more generally dispersed than the other, and also a certainty that the manufacture, by such means, will be better, because the emolument to the maker will depend upon its quality, which must be better known in its rough state, than when disguised with dress, fine-draws, and the press.

And again, those persons, who are the most numerous and most restive, are employed in the first branches. By dispersing and separating them through the country, you break the knot, and, in a short time, they would be brought to better practices, and acquire habits of industry, to become useful in their several avocations.

If we wait for the removal of clothiers now established in this or any other city, with all their expensive fixtures for going through the whole process, they will not stir without such encouragement as very few will give; and if there is any impropriety in the whole process of manufacture being carried on by one and the same person, there is no use in their being removed.

But extensive manufacturers will ever find opposition from their workers wherever they may go, because, as it will not be worth any manufacturer's while to keep up the apparatus for finishing, and the necessary hands, unless he keeps a sufficient number of looms at work to keep them employed, a number of looms in the same place must of course assemble a numerous body, and experience

experience shews, as already observed, that combinations will ensue.

Whatever improvements are to be made by adopting new modes, can be best effected by introducing them where they will not meet with opposition, and that is, where the people are not prejudiced or misled by bad habits; and there is greater probability still, that improvements may be introduced, and generally established, when men, desirous of encouraging a manufactory upon their estate, shall be convinced, that the mode is pursued, wherein is the least hazard and expense, and, at the same time, most likely to effect the purpose.

Wherefore, such gentlemen as have eligible situations (where fuel and other necessaries of life are reasonable, and a water-mill in the neighbourhood), have no more to look for, than to see * if the manufacturers have a certainty of disposing of their goods, and of getting a speedy return, without which they must be assured, that such establishments cannot flourish, which leads to the use of CLOTH HALLS, as in England, and the necessity of their being established in Ireland.

* They should insist, that the manufacturer should send his cloth to a public hall to be sold, and not by private contract to a retailer.

Of Rough-Cloth Halls—their use, and the necessity of the Establishment of them, to promote the Manufacture of Cloth in Ireland.

Note—Rough-cloth is milled, but not dressed.

Cloth-halls in England are markets, as well as repositories for cloth, in the unfinished state above-mentioned, where the goods are disposed of by wholesale.

If the manufacturer should reside at an inconvenient distance to attend the sale of the goods, he consigns them to one of the factors, of which there are many, that belong to the hall. Those are persons of such property, as to be able to advance to the manufacturer, if required, money at interest, upon the security of the deposit of his cloth, and, when account sales are furnished, they repay themselves with their proper stated charges and commission; but such manufacturers, as can wait the return of the sales, are subject only to the commission for selling. By this the poorer manufacturer is enabled to proceed with his business, upon a very small capital.

At Blackwell Hall, in London, are sold many finished cloths, as well as rough ones. The sale is every day, at certain hours. Few, if any, attend the sale of the goods at Blackwell Hall; the manufacturer consigns them to one of the factors, being himself too distant; but other halls are erected in the country towns, where the manufacturers have an opportunity of attending, and therefore

therefore have stated days and hours of sale, as at Leeds in Yorkshire. Those halls in the country are for the sale of the cloth of rough-makers. The buyers, who style themselves merchants, are the dressers or finishers of these cloths; they receive commissions, and at these halls assort themselves in a very short space of time. The goods, being paid for in money or bills (after having gone through a close inspection, and stoppages made for any defects), become the property of the merchant, who undoubtedly finishes well for his own emolument. Until such halls are established in Ireland, there will be no certainty to a distant manufacturer to sell his goods, nor will, by a timely return, the poor one be enabled to proceed, to whom a short delay must be highly inconvenient.

- But nothing more clearly points out the encouragement to be given to rough-makers, and the necessity of regular stated places of sale, than the Kilkenny fair for the frieze trade, which, though distant from both buyer and seller, and attended with inconvenience to each, yet, being a certain place of meeting, seldom fails to answer the expectation of both.

From the foregoing statement of facts, can it be longer wondered at, that we do not supply our woollen cloth market sufficiently with our own manufactures? It should rather astonish us, that we manufacture at all. A total change must take place, before we can hope to reap any benefit from this article of industry, which our country is so favourably circumstanced for, and which would introduce employment for thousands, who are at present dispersed

dispersed over the whole face of the country, languishing for want of employment.

It appears to me, that the whole arrangement for well ordering a woollen manufactory in Ireland may be compiled and summed up under the following heads.

Arrangement.

First. Prevent our wool from being exported, before it shall be fully manufactured.

Secondly. Establish *wool-staplers*, who should sort all their wool, and retail it at the same price, in small, as in large quantities.

Thirdly. Encourage *rough-cloth makers*, and induce them to sell their cloths in the established places of sale, that gentlemen may be inclined to encourage manufacturers, and having a confidence of their succeeding, may give them the small accommodation, that their trade may require. For their satisfaction, let three persons of skill be appointed judges, to examine such as apply, and grant certificates of abilities only to the deserving. And that the rough-cloth makers may be as diffused throughout the country as possible, let a bounty be paid upon the carriage, according to the distance from the hall, by which means the more remote manufacturer may send his goods to market as cheap as the nearer one.

Fourthly. *Erect and establish cloth-halls*, in places of considerable trade, particularly sea-ports, and in the centre

tre

tre of the kingdom. Enquire, what are the regulations of those in England, adding such others as may be thought necessary to give establishment to those halls; one of which may be, that each cloth sent in may be subject to a small charge for admission, from which may be in part paid the carriage bounty. And out of those halls may be distributed machines, made after the most improved models of those of England.

There are other branches belonging to the manufacture of cloth, not here spoken of; but the consideration of the subject need not be carried further; for those, whose business it is to finish from the rough-maker, such as dyers, dressers, and pressers, will settle (and should be settled) wherever those halls shall be erected, as their dependance is upon finishing after the cloth is milled, and when the rough-cloth maker has done with it. Their numbers are so small, in proportion to those, who go before them, that no annoyance of the public tranquillity may be apprehended from them.

Regulations, proposed for carrying into execution an improved Woollen Cloth Manufactory in Ireland, with some Remarks upon the Expediency of the Measures recommended.

It appears, that in Dublin, which is at present, and always has been the principal seat of the woollen cloth manufactory in Ireland, there are not more than an hundred

dred looms, on an average, kept in constant employment on broad-cloth, and we find, that the greatest exertions to encourage and increase the business have been made, but without success; nor do we find, that similar establishments in the kingdom have succeeded better, which proves, that there is something unfavourable in situation, or other fatality (perhaps both), that occasions this. We are still supplied with English manufacture, notwithstanding the expense of duty, freight, carriage, package, commission, &c. which, in a considerable degree, operates against that importation; and even at this time, that a non-importation agreement has in appearance taken place in the South of Ireland, they import English goods without reserve into the North, and they are the general wear of the inhabitants.

As I conceive the chief causes of our deficiency are accounted for in the foregoing pages, it remains to apply proper means to improve, wherever we see defects, and to avail ourselves of the knowledge we have of the mechanism and experience of the English.

The wretched state, in which we find our woollen cloth manufactory, is only to be got the better of, by falling into new methods. We see, and are, almost daily, witnesses of their superiority, and ought not to err so greatly, as to refuse to adopt measures practicable, viz. the ordinary use and custom of England, and suitable to the situation of Ireland.

A speedy sale, and certain return, are the support and life of manufactures. Nothing can promote sale so much, as
that

that those, who want to purchase, may be assured of finding a quantity and an assortment collected in one and the same place, whence they may be supplied.

The *cloth-halls* of England present themselves for this purpose; such halls must be prepared to receive the first efforts of our new established manufactures.

I am not sufficiently acquainted with all the regulations of those halls in England, so as correctly to point them out, but I know they differ, as their situations are more or less distant from the manufacturers.

In Yorkshire the manufacturers attend the halls themselves at stated times (called market days), when only the halls are open, because they reside convenient; Yorkshire being the seat of the woollen business. But at Blackwell hall, London, which is very distant from the manufacturers, the hall is open for a certain time of the day, and the goods are sold by the factors, who attend there. Blackwell hall is the model I would think of for Dublin; as Dublin seems to be to the country of Ireland, what London is to Yorkshire. A hall is necessary in Dublin, as it contains the principal number of purchasers, and the manufacturers cannot be well established in its neighbourhood, so as conveniently to attend the hall themselves; were there no other reason, but that all the surrounding parts are mostly occupied by opulent people, who only can afford to pay such high rents as all the neighbouring parts of Dublin bear; and therefore I imagine, that the business of a hall in Dublin can only be carried on by factors, as at Blackwell hall,

in London. Factors must be persons of sufficient capital, to advance to each manufacturer, upon the consignment of his cloth, money to enable him to proceed; and thus it must be, that we create for the manufacturer a capital or stock, which none of those are supposed to have, who are of that sort of manufacturers I propose to recommend and begin with.

The difficulty of procuring carriage in Ireland for light burthens, such as a single piece of cloth, from a distant situation, may be considered an obstacle to the forming of distant establishments; to remove which, I would recommend a bounty upon the carriage, to be thought of and maturely considered, and, perhaps, other regulations from the different halls in England, which can be easily procured, will appear necessary to be adopted.

The woollen manufacture is better executed in England than in Ireland, and that, principally, because the person, who labours there, has an immediate property in what he sends to market, and his profit is increased by the goodness of his work. Here the manufacturer labours for certain wages, and considers nought but expedition in his work. It is for this essential reason that I recommend *rough-cloth makers*, and *cloth-halls* for the disposal of their works. Besides, the manufacturers will be dispersed, and combinations (hitherto the destruction of trade) be thereby prevented. An increase in the number of master manufacturers will prevent a monopoly

poly of the wool, and their goods being deposited in a common hall or repository, a competition will be excited.

I have already said, that a rough-cloth maker is in condition for working, when supplied with implements to the amount of 15*l.*; and for an hundred rough-cloth makers (which would double the number of broad-cloth looms now in Dublin), the whole would amount to but 1,500*l.* for implements; a very moderate consideration.

But this alone will not be sufficient to effect so great a purpose. Gentlemen of landed property, desirous of establishing the woollen cloth manufactory upon their estates, having eligible situations, where fuel and other necessaries of life are reasonable, and easily procured, with a water-mill contiguous, must be instrumental to it; for each manufacturer must be provided with an house, garden, and field, on reasonable terms, in which must be taken into consideration, that, in the house, warmth, cleanliness, and room, are most essential to this business; warmth and dryness, on account of a size made use of in weaving; cleanliness, that, if their goods are to be finished white, or of any light colour, they may be kept perfectly clear in the ground; and roomy work-shops cannot be dispensed with. The houses must be well lighted with glass, and disposed so as to answer for their work (a plan of such a one as I would recommend, is annexed); two acres of grass for a cow and horse, with a garden of half an acre, both well fenced. This accommodation will be requisite for those, whose situations

are very distant from a cloth-hall or mill, and where carriage cannot be easily procured; otherwise they can have no occasion for a horse, and, consequently, less land will suffice. I would not recommend to any gentleman, to attempt an establishment for more than one manufacturer at a time, nor would I permit that manufacturer to occupy more than one loom, until I found him established with that one; nor should the same rough-cloth maker be permitted to have more than two at any time, otherwise he cannot superintend all his business, and work himself, which he ought.

That gentlemen may enter into this proposed plan with the greater certainty of its succeeding, I recommend that three persons of character, skilled in the most improved method of manufacture, should be judges of the abilities of such as may apply for an establishment, and that they shall grant certificates to such only as are skilled in such improved modes, and will engage to practise them. I recommend, also, that gentlemen do insist, that their manufacturers do send all their cloths to the hall, or public repository; it will establish the hall, and make it their certain market, and they by that means only can be enabled to proceed with their business; whereas, if they were permitted to sell their cloth to country shop-keepers, or dealers, they would be induced to attempt the dressing and finishing branches, to prepare it for them, and thereby fall into the error, which is now our greatest grievance. Besides, they will be often induced, or obliged to take from those country shop-keepers

keepers articles, which they might well do without, and thereby squander that *capital*, upon which hereafter I propose they shall commence, and upon which not only this advancement is hoped for, but the whole of this design has its dependance.

To obviate the difficulty already mentioned, as to the want of wool-staplers, I recommend, that a wool warehouse should, at the time of erecting the hall, be established under the same patronage, with intent not only to forward the establishment of rough-cloth makers, but to be a check and bar to impositions, by those, who hereafter may set up the business of wool-stapling. Here there may be a regular supply of fleece-wool, immediately from the grower, stapled and retailed to those only, who deposit their cloth at the hall, to be supplied therewith, instead of so much money, which a factor might be expected to advance upon the deposit of the cloth.

It has been also here observed, that it would be found necessary, at the first setting out, to extend the credit to each manufacturer, from 15*l.* for implements, to somewhat about 24*l.* or 25*l.* for stapled wool. The intention of extending the credit is, that the manufacturer shall not be at expense, but for labour, on his first piece of cloth, and, until that shall be disposed of, his family may have employment upon the wool of the other two pieces; after which he should get out wool, but in proportion as he sends value in cloth to the hall; and all those advances to be repaid by easy stoppages from the sale

sale of his goods. To take as much as possible the advantages of the improvements made in machinery, I propose that machines, from the most approved models, should be made, and distributed from the hall, to such as may be able to purchase them. But as carding engines and spinning jennies (though excellent in their use) are too complicated to be kept in repair by the common run of people, and too expensive in the purchase for the people, whom I look to, I would therefore only recommend them, as of material use in extensive factories, where they can be kept in constant practice and repair. Those machines expedite the work; but not in any instance improve it from manual labour.*

Those are the outlines for carrying into execution the great object, and I conceive that it could be reduced to practice effectually, and cause our woollen manufacture to flourish, upon the well ordering of an adequate fund.

The hall may be made temporary, until experience shall point out the expediency of building one, and the warehouse for wool need not be taken into further consideration, but for first setting forward the wool stapling business, in which, no doubt, many would embark,
when

* In England the person, who sets up a machine for carding or spinning, cards and spins for those in his neighbourhood, who have not the same opportunity to do so for themselves; in which case those engines prove a great emolument to the proprietors, by having them constantly employed, and those, who employ them, have their work cheaper than if wrought by hand. But observe, that all labour by the hand is dearer in England than in Ireland.

when rough-cloth makers should sufficiently increase to purchase from them.

I shall attempt to make a general statement of the expense, as it appears to me, that an establishment for an hundred rough-cloth makers could be made for, allowing an hundred bags of fleece-wool, which would afford an assortment of stapled clothing wool at the commencement. And if wool could be got at all times throughout the year to purchase, it would keep up the supply by the returns from the sale of goods.

100 bags of fleece wool, computed at 35 $\frac{1}{2}$.			
per bag,	-	-	£.3,500 0 0
100 looms, 8 $\frac{1}{2}$ l. per loom,	-		800 0 0
500 spinning-wheels, at 3s. per,	-		75 0 0
100 scribbling-frames and cards, at 15s. per,			75 0 0
100 sets of warping-bars, at 10s. per,			50 0 0
100 metal pans, at 5 $\frac{1}{2}$ l. per,	-		500 0 0
400 gallons of oil, 5s. per,			100 0 0
			<hr/>
			£.5,100 0 0

But it is to be observed, that, of this sum, 3,600 $\frac{1}{2}$ l. for wool and oil would be circulating stock, and the whole be returnable again, and under the direction of trustees. It must be taken into consideration, that the major part of the fleece-wool of Ireland is sold at the annual fairs of Ballinasloe and Mullingar, at which time the best assortment is to be had, and all persons, who can afford to lay in their stock for the year at these places, should; on which

which account it would be requisite, that the like precaution should be taken for the supply of the proposed hall for the current year. It would in that case require a considerable addition of capital, and would be nearly as follows :

One loom, on an average, will turn out near thirty pieces of cloth in the year ; to each piece four stone of sorted wool, and in the yolk, averaged only at sixteen, makes 120 stone, and the amount 96*l.*, which, for an hundred looms, would amount to 9,600*l.* in circulating stock of wool.

But the gross amount of fleece-wool, to afford 120 stone of clothing wool, to each of an hundred manufacturers, per annum, must exceed 9,600*l.* because, in all parcels of fleece-wool, a considerable part does not turn out fit for making cloth, but for the other branches of the woollen manufacture, such as stuffs, poplins, &c. and all goods made of combed wool ; yet as the demand for that kind often exceeds that, which is fit for cloth, there is no doubt of its being turned again into cash, and even, in time, to answer the credit, which is given for the wool.

The object of wool-staplers is so material to the establishment of the woollen manufacture upon a firm basis, that it must be, for a time, a forced business from a public fund, if not taken up by some *one*, or *more*, of capital, who shall be equal to it ; even in this manner it would not serve, unless followed upon very liberal and disinterested principles.

But

But effectually to serve, and speedily to form the establishment, it would be requisite to erect a hall and warehouse under the same roof, and, as the manufacturers deposit their cloth, to give them out the wool. A subscription set on foot would soon supply the funds, and the regulation of both should be under the controul of parliament, nor is it an object unworthy of their sanction.

I have endeavoured, as far as I was able, to recommend a plan, which no individual now in the trade can reasonably object to. The workers must see, that their immediate advantage is certain, if, by the proposed establishment, some amongst them are worthy, and should become principals as rough-cloth makers, whilst others shall have a certainty of employment from the increased quantity, which is to be expected. And such of the master clothiers of Dublin, whose concerns are adapted to the finishing branches, would find considerable emolument in following the practice of those in England, who purchase from the rough-cloth makers for the purpose of finishing, and sell to merchants for exportation, or to the drapers for home consumption."

✂ The former part of the foregoing essay was written in the year 1784, and shews the very wretched state of the woollen manufacture in Ireland at that time. Within these sixteen years it has been greatly improved by the introduction of machinery. Yet herein is demonstrated, that evils still exist, which, for a long series of years, will operate against it, unless provided against, and methods be adopted at this time of the Union. Union alone could

could even introduce woollen manufacture into this kingdom upon a respectable footing. It proposes, in a great measure, to provide for one of its greatest difficulties, after which, method and means to enforce it will ensure to Ireland a full participation of this invaluable manufacture with England.

Paper Manufactory.

The paper manufactory appears to be very much declining; several mills have stopped working, and are going to ruins. The manufacturers say they have not sufficient rags, and that there is not a smart demand for what they do make.

A Sail and Sack-cloth Manufactory,

If once established, would answer in an extraordinary degree. The encouragement held out by the Dublin Society, for raising hemp, must eventually answer the intention; when the raw material is provided, a fine field for improvement will open to us, to embark in, and to raise a manufacture in great demand.

SECT. 15. *State of Encouragement to them, and the peculiar aspects of the Situation for their Extension.*

The woollen manufacture is deserving great attention, and encouragement to it would now be of material service; but so much has been said upon this subject by Mr. Nixon, in the last section, that more need not be added here upon that head. The county of Dublin is peculiarly adapted to the woollen or cotton manufacture, or to any business, that requires water and machinery.

At the Naul there is a large stream, that could be converted to the use of manufactures or machinery of every kind, in the most extensive line. From the fine and regular fall of this abundant stream, there might be erected mills every hundred yards for some miles.

State of Mills of every kind.

City of Dublin. One mill for grinding dye-stuff, and one for oil; Walsh and Co. Mill-street.

One mill for grinding dye-stuff; Mr. Horan, Mill-street.

One corn-mill, steam-engine; Mr. Stephens, Cole-alley.

City

City of Dublin. Two corn-mills; Clarke and Manders, Watling-street.

One steam-engine, for various purposes about a brewery; Mr. Sweetman, Francis-street.

One steam-engine for corn; Mr. Jackson, Phenix-street.

One Corn-mill; Alderman Manders, James's-street.

One mill, for oatmeal, malt, and various purposes; Mr. Roe, Atkinson's-alley, Coombe.

One steam-engine, for various purposes in a distillery, Marrow-bone-lane.

One steam-engine for grinding corn; Mr. Keating, Great Britain-street.

Island-bridge. One flour-mill, Alderman Manders.

One sitting-mill for marble, now grinding malt; Mr. Edmondson.

One clothier's mill; Mr. Beasley.

One bleacher's or wash-mill, for bleaching printed goods; Mr. Burton.

One wheel for supplying water to Kilmainham hospital.

Chapel-izod. One flour-mill; Mr. Hyland.

One wash-mill; Mr. Conway, cotton-printer.

One woollen machinery; Mr. Nowlan.

Two fulling ditto; Mr. Nowlan.

Red-

- Red-mills.* One paper-mill ; Mr. Slater.
 One cotton machinery ; Mr. Murphy.
 One woollen machinery ; Mr. Atkinson.
- Two woollen machines ; Mr. Nixon.
- Mardyke.* Two tuck-mills ; Mr. Haskins, army-clothier.
- Palmerstown.* Six mills for various uses ; Mr. Clarke's printing-works.
 Seventeen wheels, iron-works ; Mr. Blair.
 Two oil-mills ; Mr. O'Brien.
 One dye-stuff ditto ; ditto.
 One skin and corn-mill ; Mr. Lawless.
 Three wash-mills ; Mr. Clarke.
- New Holland.* Four wire-mill wheels ; Mr. O'Reilly.
- Luttrel's-town.* Sites for several wheels ; Mr. White.
- Lucan.* Eight wheels, iron-works ; Mr. Blair.
 One grist-mill (formerly bleach-mills) ;
 Mr. Siffon.
 One corn-mill ; Mr. Young.
 One paper-mill ; Mr. M'Donnell.
- Eskar.* One cotton machinery ; Mr. Hilton.
- Leixlip.* One corn-mill ; Mr. Goodshaw.
 One iron-mill ; Mr. Marfden.
- Harold's-croft.* One corn-mill ; Mr. Hyland.
 One calender-mill ; Mr. Armstrong.
 Two paper-mills ; Mr. Cuppidge.
 One wire-mill ; ditto.

Harold's

- Harold's-croft.* One skin-mill; Messrs. Wall, Cogan,
and Murphy.
Two corn-mills; Messrs. Bermingham,
Murphy, and Co.
- Kinnage.* Two flour-mills; Mr. Grange:
One blade-mill; Mr. Kelly.
One skin-mill; Mr. McCann.
One corn-mill; ditto.
- Templeage.* One flour-mill; Mr. Newman.
One paper-mill; Mr. Burrowes.
One paper-mill; Widow Archbald.
One paper-mill; Mr. McDonnell.
- Tallagh.* One corn-mill; Mr. Newman.
- Dolphin's-barn.* One cotton-mill; Mr. Brown.
One cotton-mill; Mr. Fairbrother.
- Kilmainham.* One corn-mill; Mr. Magennis.
One flour-mill; ditto.
- Beggar's-bush.* Two cotton wash-mills; Mr. Robinson.
- Ball's-bridge.* Three cotton wash-mills; Duffy, Byrne,
and Hamill.
- Donnybrook.* Two ditto, ditto.
Two ditto, Mr. Dillon.
- Clonskeagh.* Two iron-work wheels; Jackson and
White.
Three iron-work wheels; Mr. Stokes
and Co.
- Milltown.* Two woollen machines; Mr. Hunt.
Three woollen machines, logwood and
oil-mills; Burk and Mullen.
- Rathmines.*

- Rathmines.* Two woollen machines; Mr. Bell-wood.
- Rathgar.* Two cotton wash-mills; Mr. Osbrey.
- Rathfarnham.* One flour-mill; Messrs. Newman, Curraghan, and Flanagan.
One paper-mill; Mr. Freeman.
One ditto; Mr. Teeling.
One corn-mill; Mr. Drumgold.
- Rockbrook.* One paper-mill; Mr. Nun.
One ditto; ditto.
One ditto; Mr. Sullivan.
One ditto; Mr. Manger.
One ditto; Mr. Taylor.
One ditto; Mr. Fry.
- Kilmasbegue.* One corn-mill; Mr. Doolan.
- Dundrum.* One paper-mill; Mrs. Hall.
Three mill-wheels, iron-works; Mr. Stokes.
- Comberry, near Buldoyle.* One corn-mill; Mr. Dixon.
- Knockengen, near Balbriggan.* One bleach-mill; Mr. Moore.
- Siddolph.* One flour-mill; Mr. Walth.
- Gormanstown.* One corn-mill; Mr. Nowlan.
One ditto; Mr. Boylan.
- Doolough.* One corn-mill; Mr. Flinn.
- Naul.* Two wheels (flour); Walth and Co.
One bleach-mill; Mr. Teeling.
- Bowther.* One corn-mill.

Clondalkin.

<i>Clondalkin.</i>	One gunpowder-mill ; Mr. M ^c Nally. One gunpowder-mill.
<i>Marly.</i>	One threshing-mill ; Right Hon. David Latouche.
<i>Fieldstown.</i>	One threshing-mill ; Mr. Segrave.
<i>Asbgrove.</i>	One corn-mill.
<i>Newtown.</i>	One corn-mill.
<i>Corduff.</i>	One corn-mill.
<i>Killerogh-island.</i>	One corn-mill.
<i>Swords.</i>	One corn-mill ; Mr. Meras. One windmill ; ditto. One water-mill ; Mr. Wade.
<i>Turvey.</i>	One corn-mill.
<i>Portmarnock.</i>	One corn-mill ; Mr. Dickinson.
<i>Santry.</i>	One corn-mill.
<i>Pelletstown.</i>	One corn-mill.
<i>Rogerstown.</i>	One corn-mill.
<i>Kiltiernan.</i>	One corn-mill.
<i>Donabete.</i>	One corn-mill.
<i>Walsh's-town.</i>	One corn-mill.
<i>Raghereden.</i>	One corn-mill.
<i>Glasnevin.</i>	One paper-mill ; Mr. M ^c Ilwrath.
<i>Drumcondra.</i>	One corn-mill ; Mr. Sherlock. Two corn-mills ; Mr. Halpin. One ditto ; Mr. Montgomery.
<i>Finglafs.</i>	One corn-mill ; Mr. Clarke. One cotton machinery ; Mr. Dickinson.
<i>Whitestown.</i>	One corn-mill ; Mr. Rickards.
	<i>Balbriggen.</i>

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Balbriggen. One corn-mill; Mr. Magee.
 One cotton machinery; Mr. Tiernan.
 One formerly cotton machinery, now
 converted into a flour-mill.

WIND-MILLS.

Feltrim. One corn-mill.
Balbery. One ditto.
Kilsalaghan. One ditto.
Garristown. One ditto.
Ballymadun. One ditto.
 One ditto, water-mill.
Barrington. One ditto.
Nutstown. One ditto.
Balruddery. One ditto.
Donabete. One ditto.
Rush. One ditto; Patrick Farrel.
Knock. One ditto; Mr. McCormick.
Corbally. One ditto.
Skerries. One ditto; Luke Duff.

SECT. 16. *Plantations and Planting.*

Registered Trees, with the Clerk of the Peace of the County of Dublin, from the 31st of March 1800, to the 27th of July 1801.

RICHARD McNally, Esq. Killogher, parish of Balscadden; March 31, 1800; 250 ash, 22 beech, 18 silver fir.

Henry Vinell, Esq. Cullen's-wood, parish of St. Kevin; April 8, 1800; 1000 larch, 1000 elm, 1000 Scotch fir, 1000 Spruce fir, 1000 sycamore, 100 mountain ash, 100 birch, 100 lime, 50 chestnut.

Matthew Handcock, Esq. Knocklyon, parish of Tal-
lagh; May 6, 1800; 725 elm, 100 horse-chestnut, 200
lime, 150 sycamore, 700 alder, 50 service, 250 moun-
tain-ash, 450 ash, 200 oak, 300 birch, 1750 beech, 25
plane, 25 maple, 80 Weymouth pine, 320 spruce fir,
600 silver fir, 800 larch, 1050 Scotch fir.

Joseph Leeson, Esq., lands of Roudlum, Malahide;
October 14, 1800; 100 horse-chestnut, 100 ash, 50]
Dutch alder, 100 hornbeam, 500 sycamore, 500 oak,
500 larch, 500 mountain-ash, 300 spruce fir, 100
Scotch fir.

Richard Johnston, Esq., Ballinteer, parish of Taw-
ney; April 4, 1801; 2304 beech, 300 alder, 900
grafted

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grafted elm, 1000 Scotch fir, 100 silver fir, 40 silver poplar, 344 oak, 1000 larch, 700 horse-chestnut, 643 mountain-ash, 300 sycamore, 200 birch, 150 lime.

William Birmingham, Esq., Friar's-town, parish of Tallagh; April 29, 1801; 2,700 beech, 16,350 oak, 1,100 spruce fir, 500 silver fir, 3,250 Scotch fir, 100 alder, 1,800 mountain-ash, 930 elms, 1,500 ash, 100 horse-chestnut, 300 larch, 100 lime, 100 service trees.

James Woodmason, Esq., Emsworth, parish of St. Doulogh; 2,275 ash, 675 elm, 111 mountain-ash, 1,269 beech, 166 sycamore, 104 larch, 67 horse-chestnut, 50 oak, 54 alder, 30 holly, 9 chestnut, 20 Scotch fir, 852 spruce fir.

John Rutherford, Esq., Balgriffin, St. Doulogh's parish; June 5, 1801; 559 sycamore, 423 mountain-ash, 25 ash, 125 horse-chestnut, 1,625 fir, 450 elm, 225 oak, 1,100 beech, 100 birch, 350 alder, 200 walnut, 720 poplar, 100 platanus, 500 timber fallow.

Alderman Henry Hutton, Dundrum, parish of Tawney; July 11, 1801; 62 ash, 4 plane trees, 130 lime, 9 oak, 200 birch, 120 beech, 230 elm, 153 fir, 500 Scotch fir, 200 larch, 50 poplar, 16 chestnut.

Stuart King, Esq., Grange, parish of Buldoyle; July 27, 1801; 1,361 oak, 427 elm, 373 mountain-ash, 315 beech; and, on another estate, 232 elm, 193 mountain-ash, 32 beech.

There are a few planters, that have not registered their trees.

Counsellor Caldbeck informs me, that he has planted near 200,000 of the various kinds of forest-trees at Kilmafhogue; I fear they have been taken no care of, as what I have seen of them were in a bad way.

Alexander Hamilton, Esq. near Balbriggen, raises and plants ten or twelve thousand yearly, which are very judiciously attended to, and in a very flourishing state.

Mr. Bellwood, at Rathmines, has planted, the last year, about 1,000 ash and elm, which are in a promising state.

There are no more plantations worthy of notice in this county, and those, that are above noted, bear no proportion to the consumption.

SECT. 17. Of any Improvements, which may occur for future Encouragement, and particularly for the Preservation of Trees when planted.

PLANTATIONS of ash, or such trees as would make large hoops, might be made very thick, and, when fit, thinned out for that purpose, leaving, at the proper distance, sufficient healthy vigorous plants to stand for timber, and taking out all the rest for hoops, at about five years growth; they would yield an abundant profit, and be an advantage to the standing crop, by sheltering while young. Keep them clean from weeds, or any under-

under-growth of briars, thorns, &c. &c.; fence the plantation well, and keep it dry, or, if damp, plant it with alder, poplar, or willow. Make plantations in such situations as afford shelter from the westerly winds; adapt the tree to the soil; and let every landlord enjoin his tenant to plant a certain number of trees annually, in proportion to his farm.

SECT. 18. *State of Nurseries within the County, and
Extent of Sales.*

GENTLEMEN, of late years, have laid out their own nurseries, so as to occasion much less demand from the nursery-men, which was formerly much more considerable than at present.

The demand at the nurseries, these four years past, had much declined until this spring, since which the nursery-men say they have had a very great demand.

Messrs. Toole, of Kevin-street; nursery at Cullen's-wood, about thirty acres; dispose of a vast quantity of trees, more than any other in the trade.

Mr. Simpson, of College-green; nursery at Inchicore,] about seven acres; may be considered as next in eminence and sale.

Mr. Smitten, of Capel-street; nursery at the Circular-road, Prussia-street, about seven or eight acres, and tolerably well stocked; it may be considered not inferior to Mr. Simpson's at Inchicore.

Mr.

Mr. Burnet, at Richmond, was extensive in the nursery trade ; he had about twelve acres, and disposed of a quantity of trees, equal to any of the nursery-men about Dublin, except Messrs. Toole ; but, since his death, this nursery has much declined ; great part of it is now set for building ground, and the remainder is insignificant.

Mr. Grimwood, of Charlemont-street ; nursery at the Circular-road, and at Rathmines, about seventeen or eighteen acres. These grounds are much taken up with vegetables, but he vends much trees.

The Hibernian nursery, at the Phenix-park, does now but little business ; it is almost extinct, as well as the Foundling Hospital nursery, James's-street ; they were formerly extensive, and sold great quantities.

Mr. Field, of Abbey-street, has about three acres at the Royal Hospital, and does not vend any material quantity.

Mr. Bray has about twelve acres ; the most of them was formerly under nursery, but, at present, not more than six acres, the remainder being under flowers and vegetables.

SECT. 19. *Price of Timber, and State of it in the County.*

ASH, oak, elm, beech, and sycamore, are, on an average, on the spot where they grow, 4*l.* a ton, of fifty feet, round measure, and twenty shillings carriage, within
seven

seven miles of the city. Timber rises in value every year, on account of the scarcity, and is likely to continue rising, as the small quantity remaining is, on an average, through the county, cutting down, in the proportion of four to one, that is planted. This calls loudly for redress, to reinstate us in the possession of timber, which we had formerly in such abundance.

SECT. 20. *Quantity of Bog and Waste Ground.*

THE bogs, mountains, and wastes of the county of Dublin, occupy a great part of it, full one-eighth of the whole. Those mountains to the south, adjacent to the county of Wicklow, are the most extensive, being fifteen miles in length, and from three to four in breadth, or near 34,000 square acres. There is a large portion of bog in these mountains, probably 2,000 acres. There are also bogs in the north parts of the county, the principal of which are at Garristown and Balruddery, called the Bog of the Ring.

Between Rush and Donabate there is a tract of sand and mud; it is wide at the inside, and, at the entrance of the tide by the rabbit-warren, not above four hundred yards across. At Malahide there is a similar tract, of 1,500 acres. These tracts would be easily recovered from the sea.

At

At Coolquay there is a common of eighty or ninety acres.

The Ring, near Balruddery, a bog and common, of about thirty acres.

Corduff common, about forty acres.

Donabete ditto, about thirty-five acres.

Garristown ditto, four or five hundred acres in the county of Dublin, and nearly the same in the county of Meath; the greatest part bog.

Lusk, five commons, about three hundred acres; the farmers here carry off the upper stratum of the commons for manure.

Swords common, about eighty acres.

Kilmainham common, about fourteen acres.

Belger, a small common, twenty-four acres.

Fox and geese common, about eighty acres.

Crumlin common, about an hundred and fifty acres.

Clondalkin common, about an hundred and eighty acres.

Saggard, small common, twenty acres.

Bray common, about twenty-five acres, good ground.

Newcastle, two commons, about eighty acres.

Hazel-hatch common, two hundred acres.

Balscadden common, about thirty acres.

Rathcoole common, about five acres.

Tallagh common, about twenty acres.

Kilshogan common, about two hundred and fifty acres.

These

These commons, added together, occupy an extent of at least four square miles, or 2,560 acres, and would, if enclosed, be of ten times the utility they are at present. The borders of them are receptacles for poverty and idleness.

SECT. 21. *Possibility and Means of improving them.*

COUNSELLOR Caldbeck has lately purchased a large extent of the mountains above Rathfarnham, supposed to be at least five hundred acres, which he is improving by roads, buildings, enclosures, draining, planting, &c. He informs me, that he has planted near 200,000 trees of ash, elm, sycamore, &c. ; and there is a chalybeate spring, that probably indicates iron ore in that quarter.

There are many vallies in those mountains, to the south of the county, that contain tolerable land, and require only to be better fenced, drained in some places, and well manured, and may be then converted into good tillage ground. I observed, upon my survey, some tolerable looking oats in the parts I have described, though put into the ground in a rude state.

Many parts of these mountains are, however, totally unimproveable,* being covered with loose rocks without soil ;

* It might be worth while to try the effects of dropping the seeds of various hardy trees in the crannies of these rocks ; numbers would doubtless vegetate, and the expense would be trifling.

soil; other parts might be planted with trees. Where there is so great a scarcity of timber, this ought to be effected by every possible means, particularly as timber seems to be declining in quantity in Ireland, and, of course, rising greatly in price.

Bees would probably make a profitable branch of business on these mountains; they would live well on the heath. It appears, from accounts given by practical bee-masters, that heath-lands are a favourable situation for bees. In the county of Cambridge, abounding with extensive barren heaths, which allow scarcely any flowers to spring up and blossom, there is such a profusion of honey, that there have been seventy or eighty hives in one farmer's ground. The same circumstances are observable in Hampshire and Wiltshire. Every square mile might maintain an apiary and a bee-master, with about twenty hives, and, by cultivating rosemary, borage, lemon-thyme, and mignonette round his hives, he would add richness to the honey, and considerably to his profit, not only by supplying his bees with additional food, but because the three first articles will always find a ready sale, in any quantity, amongst the herb-sellers in Dublin, and the seed of the mignonette is a very profitable article for the seed-shops. These articles are such as produce the best honey, and greatest quantity. Were these heaths planted with timber trees, they would be of great service, on account of the farina, and honey-dews they afford to bees. By laying out a principal sum for planting, and establishing apiaries in convenient situations,

it

it would most likely pay forty or fifty per cent., and the bee-masters might have the charge of the wood. It would have the most beneficial effects, and give employment to numbers of poor people, that, in such a situation, might acquire a comfortable living.

Enclosing and draining of the commons would be a great improvement to the county, and a source of riches, public benefit to the markets, and employment to the poor: 3*l.* 10*s.* or 4*l.* per acre would, in most cases, drain and enclose these commons, which, when done, would, with proper management, be worth 2*l.* or 3*l.* an acre; in some instances, double that sum, as many of the commons lie contiguous to towns and villages.

SECT. 22. *Obstacles to them, and best Means of removing them.*

THE greatest obstacle, that presents itself to my view in planting, is the danger of their being cut or destroyed while young, as has been the case in many places; and, as to other improvements of green crops, turnips, or any of the cabbage tribe, the occupiers of land say, more, than any profit that would attend them, would be taken or purloined from them. I have little doubt, but that this will be succeeded by a more prudent demeanour in the lower class; that provisions will be cheaper; they will see their folly, and their circumstances will be meliorated.

Green

Green crops would be peculiarly useful in those mountains for cattle, when nothing else could be obtained for them in winter, and would be one great step to further improvements, by raising dung to enrich the soil.

Roads and enclosures naturally present themselves as the first objects to be obtained, in improving waste grounds; this done, additional corn and hay might be then raised for market, now absolutely lost to the country. Besides, sheep are often kept upon these wastes, and are subject to the rot; enclosing and draining would prevent this. But a stronger argument still for draining is, that the neighbourhood will be healthier.

Those, who have an interest in these wastes, so near the capital, would do well to consider the advantage, that might accrue from a spirited improvement. Counsellor Caldbeck, whom I have already mentioned, has shewn an example, in the midst of these mountains, worthy of imitation; and were a few more gentlemen, of such an enterprising disposition, to disperse through those parts, the effects would soon appear, both to the individual and the public.

For the better effecting this great business, these grounds ought to be tithe free for forty or fifty years; the succeeding generation, after improvement was made, could not then complain of paying a certain proportion of tithe.

Long leases, even in perpetuity, should be granted to such qualified persons, as would undertake the necessary improvements and planting, which might be granted,
under

under a few restrictive clauses, not to oppress, but to encourage amply, in such an arduous undertaking.

SECT. 23. *Habits of Industry, or want of Industry amongst the People.*

THE working manufacturers, even when work is in abundance, mostly idle on Mondays, though they will be often obliged to pinch themselves the remainder of the week, or run in debt; they do not consider they lose a day's earning, and spend another, destroy their health, and hurt their family; having, by these means, but four days earning, to subsist them and families seven days. The labourer in the country is not so much given to this bad habit as the tradesman, being mostly out of town, and not so liable to temptation as those in the capital. The high rates of the market afford but little time for idling at present. The private retailers of whiskey, at all times, occasion too much dissipation and idleness among labourers.

SECT. 24. *The use of the English Language, whether general, or how far increasing.*

THE English language is the general one spoken in this county; very few are in the habit of speaking Irish, nor do many understand it, except those, that have removed here from remoter counties.

SECT.

SECT. 25. *Account of Towers, Castles, Monasteries, ancient Buildings, or Places remarkable for any historical Event.*

AN ancient round tower at Lusk, and an old castle adjoining.

An ancient round tower at Swords, and a very large old castle. There are two subterraneous passages, which extend in a northern direction from this castle, supposed to communicate with the castle of Landanstown, situate in the demesne of Mr. Cobb, at the distance of two miles. The parliament was held in this castle, during part of the reigns of King Richard I. and King John.

An ancient round tower at Clondalkin.

An old castle at Clontarf, the property of Captain Vernon, and inhabited by him; it is in excellent order, and beautifully situated.

An old Druid's temple, in Lord Howth's demesne, at Howth.

An old castle, at Baldungan, near Swords.

An old castle, at Balruddery.

An old castle, at Bremonoore, near Naul.

An old castle, at Kilsallaghan.

A fine old castle, at Naul, situate on a steep rock, and commanding a beautiful romantic glen.

An old castle, at Dunshaghley, in good repair, and inhabited.

An

An old castle, at Artane, in good repair, and inhabited.

An old castle, at Malahide, of great antiquity, belonging to, and now inhabited by the Talbot family, and in excellent repair.

An old castle, at Castleknock, built in the reign of Henry II.

The ruins of an ancient round tower, at Rathmichael.
Puck castle, Shankhill.

An old castle, at Shaningaugh.

Four old castles, at Dalkey.

An old castle, at Bullock.

A fine old castle, at Roebuck, in good order, and inhabited by ——— Crofton, Esq.

An old friary, at Monkstown.

An old castle, at Merrion.

An old castle, at Curdis-stream.

An old castle, at Ballydowd.

Castle-Adam, an old castle.

An old castle, at Finstown.

Castle-Timing, an old castle.

An old castle, at Cheeverstown.

Danes-rath castle, near Clondalkin.

Castle Dremna, an old castle, in repair, and inhabited.

An old friary, adjoining Larkfield.

An old castle, at Landanstown.

Bagot-rath castle, on the Rock road, near Dublin ;
there is but a small remnant of it now remaining.

Clontarf

Clontarf is remarkable for the last battle, that was fought between the Irish and Danes, in April 1015. The Irish were inferior in number to the Danes; both armies were commanded by experienced chiefs, and the contest was long, fierce, and bloody, with various turns of fortune, till, at length, the Danes were no longer able to withstand the shock, and were routed with prodigious slaughter, and at length forced to quit the kingdom entirely, having lost eleven thousand men in this battle. The Irish monarch, the great Brien Borue, king of Munster, was killed in the moment of victory, by the flying Danes, who, seeing him unguarded in his tent, stopped, and slaughtered him, and were themselves immediately after cut to pieces.

SECTION XXVI.

CHURCHES—RESIDENT CLERGY—SCHOOLS—GLEBES, AND GLEBE-HOUSES.

<i>Churches.</i>	<i>Clergy.</i>	<i>Glebes and House.</i>	<i>Schools.</i>
Balscadden, no church;	{ W. Blundel, A. B. Vicar.		
Baldungan, no church;	{ Christopher Robin- son, A. M. rector.		
Balruddery, church in order;	{ Rev. Mr. Ryan, Hon. and Rev. Bo- leyn Howard, A.M. vicar.	} House.	} Philip Conolly, Schoolmaster.
Holmpatrick, church in order;	{ Rev. William Henry Johnston, A. B. curate.		
Naul, Hollywood, Gralach,	{ John Echlin, A. M.		
Church in order, Garriokown, church in order;	{ Rev. Hector Munro, A. M. vicar.	Nineteen acres, and House.	{ Daniel Reed, Schoolmaster.

<i>Churches.</i>	<i>Clergy.</i>	<i>Glebes and Houses.</i>	<i>Schools.</i>
Lusk, Kilrush, Kimore, Church in order, Clonmethon, Palmerstown, Greenock, Westphalstown, Ballyboghil, Church in order; Donabets, } United. Portrane, } Church in order; Swords, } Malahide, } Killeek, } United. Killofory, } Church in order; Kilfalaghan, chapel mid- way; church in order;	Rev. Philip Ryan, A. M. vicar. Right Honorable and Reverend Lord Viscount Strangford, A. M. curate. Abraham Stewart, A. B. Rev. James Veirchoyle, L. L. D. vicar; Rev. William Annesley, A. M. curate. Rev. Mr. Wolfe, A. M. vicar.	Houfe. Glebe-houfe about to be rebuilt. Glebe 22 acres; Houfe; Glebe 32 acres.	{ William Mearry, School-master. Daniel Read, School-master. Philip Coogan, School-master. James Davis, School-master.

OF THE COUNTY OF DUBLIN.

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<i>Churches.</i>	<i>Clergy.</i>	<i>Glebes and Houses.</i>	<i>Schools.</i>
Rect. of Finglafs, St. Margaret, Ward, Artane, Killester, Church in order; Vicarage of Finglafs, Cloghranhidert, Ballycoolane, Church in order; Portmarnock, Church in order; Cloghrane, Church in order; St. Deulogh, Church in order; Castleknock, Clonsilla, Malahidert, Church in order;	{ Rev. Richard Bourne, A. M. rector. } Rev. William Dobbin, D. D. vicar. Hector Monro, A. M. curate. Rev. John Baird, rector. James Saurin, A. M. J. Connor, D. D. vicar.	 House, Seventeen acres, { House. } { Four acres, House. } Seventeen acres.	 John Edmonds, School-master. { Samuel Connor, School-master. }

STATISTICAL SURVEY

<i>Churches.</i>	<i>Clergy.</i>	<i>Glebes and Houses.</i>	<i>Schools.</i>
Santry, Church in order ; Coolock, Church in order ; Howth, } United. Kilbarrack, } Buldoyle, } Church in ruins ; Raheny, Church in order ; Drumcondra, Church in order ; Glasnevin, Church in order ; Eskar, Lucan, } Alderg, } united St. Catherine's, } Confey and Stacumney, Church in order,	Thomas Smyth, D. D. vicar. Patrick Carlton, A. M. vicar. J. Lewis, A. M. curate. Rev. George Stevenfon, A. M. rector. Rev. Jacob Cramer, A. B. curate. Rev. Travers Hume, A. B. curate. Rev. Edward Berwick, A. B. vicar and curate.	} House. } House very old. } House. }	{ James Bell, School-master Henry Battersby, School-master. John Irwine, School-master. John Wallace, School-master. } William Fred. Fowk, School-master.

<i>Churches.</i>	<i>Clergy.</i>	<i>Glebes and Houses.</i>	<i>Schools.</i>
Clontarf, Church in order ; Chapelized, } Palmerstown, } United. Ballyfermot, }	Rev. John Usher, A. M. rector. { Rev. Wm. Warren, A. M. rector and vicar. Rev. Hugh O'Neal, A. B. curate. { Rev. Roger Ford, A. M.		John Moore, School-master.
Church in order ; Crumlin, Church in order ; Tawney, church in order ; belongs to the archdeaconry of Dublin. }	Rev. Matthew Campbell, A. B. curate.	{ House. House.	{ George Harvey, School-master. { Robert Ruffel, School-master. { Henry Curran, Schoolmaster.
Newcastle, church in order ; belongs to the archdeaconry of Glandelough. }	Rev. James Hastings, L. L. B. vicar.	{ Seven acres, House.	{ Vacant.
Clondalkin, Kilmacruddery, Church in order ; }	Rev. John Grant, A. M. vicar.		{ —— Spurling, School-master.

<i>Churches.</i>	<i>Clergy.</i>	<i>Glebes and Houses.</i>	<i>Schools.</i>
Tallagh, } Whitechurch, } Cruagh, } Church in order ; Rathfarnham, } Church in order ; Kilmacud, } Stillorgan, } Church in order ; Monkstown Hill, } Dalkey, } Killiney, } Bullock, } Carrickbrenon, } Church in order ; Rathcoole, Tassagard, } Newtown, Simon's- } town, Tallaght, } Calliagh's-town, } Church in order ;	Rev. Robert Coghnan, vicar and curate. Rev. Henry McLean, A. B. curate. Rev. Edward Beatty, B. D. curate. Rev. Marm. Cramer, D. D. curate. { Rev. Jof. Elwood, L. L. B. vicar. }	{ House. Five acres, House. { Two acres, House. }	{ Anthony Armstrong, School-master. Robert Toole, School-master. Thomas Hooper, School-master. Vacant. Joseph Simon, School-master. }

<i>Churches.</i>	<i>Clergy.</i>	<i>Glebes and Houses.</i>	<i>Schools.</i>
Kilgobbin, Church in order; Conaught, Kiltiernan, belongs to the deanery of Bray;	Rev. Patrick Crawley, A. B. curate. Rev. E. Mangan, A. M.	{ House.	
Rathmichael,	{ Rev. Edward Mangan, A. M.	Seventeen acres, House.	

CHURCHES,

CHURCHES, RESIDENT CLERGY, &c.

Deanery of Dublin.

Churches.	Clergy, &c.
<i>St. Audeon.</i>	Reverend Thomas Craddock, L. L. B. prebendary and curate ; Reverend William O'Connor, A. B. and Reverend Thomas Craddock, A. B. curates assistants.
<i>St. Michael.</i>	Reverend Richard Graves, D. D. S. F. T. C. D. prebendary ; Reverend Henry Savage, A. B. curate.
<i>St. Michan.</i>	Reverend Wm. Dobbin, D. D. rector ; Reverend William Ledwich, L. L. B. and Reverend Thos. Gamble, curates.
<i>St. Mary.</i>	Reverend Dixie Blundel, D. D. rector ; Reverend Singleton Harpur, A. B. and Reverend William Blundel, A. B. curates.
<i>St. Thomas.</i>	Reverend Arthur Maguire, A. B. rector ; Reverend John Fay, curate.
<i>Chapel of St. George.</i>	Reverend John Barker, A. B. chaplain ; Reverend George House, and Reverend Richard Watton, lecturers.

Newly

Churches.

Clergy, &c.

Newly erected Parish of St. George. Reverend Charles

Cobb Beresford, A. B. rector.

Reverend William Mauleverer, A. B.
curate.

St. Paul. Reverend Samuel Murray, D. D. rector;

Reverend H. Campbell, A. B. curate.

St. John. Reverend George Graydon, L. L. B.
prebendary;

Reverend Matthew Sleater, A. B.
curate.

St. Nicholas within. Reverend John Bradshaw, A. B.
curate;

Reverend J. Hamilton, A. M. chaplain;

Reverend Andrew Staunton, A. M.
reader.

St. Werburgh belongs to the Chancellorship of the Cathedral Church of St. Patrick.

Reverend Richard Bourn, A. M. curate;

Reverend John Lefrange, A. M. curate;

Reverend Robt. Whistler, A. B. reader;

Reverend John Lewis, A. B. catechist,
pursuant to the Bishop of Clogher's
will.

St. Andrew. Honorable and Reverend John Hewit,
A. M. vicar;

Reverend Matthew Ruffel, A. M.
curate.

St.

Churches.

Clergy, &c.

St. Mark. Reverend. Chrifr. Irvine, A. B. vicar ;
Reverend John Leahy, A. M. curate.

St. Nicholas without. Reverend Walter Blake Kirwan,
curate ;

Reverend John Letablere, curate.

St. Luke. Reverend Edward Ryan, D. D. curate ;
Reverend John Robinson, A. M. curate.

St. Peter. Reverend Robert Fowler, A. M. arch-
deacon of Dublin, vicar ;
Reverend Vere Effex Quail, A. M. and
Reverend Thomas Lyfter, D. D.
curates.

St. Kevin. Reverend Robert Fowler, A. M. arch-
deacon of Dublin, curate ;
Reverend Mr. Lewis, curate.

Donnybrook. Reverend Robert Fowler, A. M. arch-
deacon of Dublin, curate ;
Reverend Gore Wood, A. B. curate.

St. Bridget. Reverend Henry Lomax Walfh,
L. L. D. curate ;
Reverend Richard Drury, and
Reverend Thomas Kingsbury, curates.

St. Michael of the Poole is united to St. Bridget.

St. Anne. The Honorable and Reverend John
Pomeroy, A. M. vicar ;
Reverend Gabriel Stokes, and
Reverend William Grattan, curates.

St.

Churches.

Clergy, &c.

St. Catharine. Reverend James Whitelaw, A. B.
vicar ;

Reverend James Stubbs, A. B. and
Reverend Wm. Whitelaw, A. B. curates.

St. James. Reverend James Watters, A. B. vicar ;
Reverend William Hamilton, curate.

St. Matthew, Ringsend. Reverend Robert Ball, A. B.
chaplain ;

Reverend George Molden, A. B. de-
puty chaplain.

Manor of Grange-Gorman. Reverend Henry Camp-
bell, A. B. curate.

French Church of St. Patrick. Reverend John Leta-
blere, A. M. minister.

German Lutheran Church of Poolbeg-street. Reverend
Marcus Tonson.

Lying-in Hospital. Reverend William Ould, L. L. D.
chaplain.

Magdalen Asylum. Reverend Hosea Guinness, L. L. D.
chaplain.

Royal Hospital. Reverend — Vesey, A. M. chaplain.

House of Industry. Reverend Henry Campbell, A. B.
chaplain.

☞ There are schools annexed to every parish in
Dublin.

SECT. 27. *Whether the County has been actually surveyed—when and whether the Survey is published.*

THIS county has not been surveyed for a great many years; the last map, that was made of it, was by Mr. John Rocque, and was published in London, on a large scale of four sheets. In 1799 there was another map on a reduced scale from the same survey, published also in London by Laurie and Whittle.

SECT. 28. *Weights and Measures, liquid or dry—in what instances are Weights assigned for Measures, or vice versa.*

The weight in general use for all sorts of grain, groceries, provisions, wool, hay, &c. &c. is the avoirdupois weight. In the instance of grain of every denomination, weight is assigned for measure: the barrel, nominally so called, being a measure of four bushels, each containing ten gallons, and is under the following regulations of weight, viz.

Wheat,	20 stone to the barrel.	
Peas and beans,	ditto,	ditto.
Barley,	16 stone,	ditto.
Oats,	14 stone,	ditto.
Potatoes,	20 stone,	ditto.
Malt,	12 stone,	ditto.

All

All weights and measures are under the control of the Lord mayor, and standards for each are kept in his possession. In order to prevent abuses, none are permitted to be used, without being examined and stamped by the clerk of the market.

SECT. 29. *The Weight, or Measure, by which Grain, Flour, Potatoes, Butter, &c. are sold.*

GRAIN of all kind is sold by the barrel, of a certain weight, as noticed in the last section.

Butter, meat, and all kinds of provisions, groceries, and shop goods of every denomination, are sold by avoirdupois weight, containing sixteen ounces to the pound, fourteen pounds to the stone, and eight stone to the hundred.

Hay is sold by the load, containing four cwt., though commonly, made up to $4\frac{1}{4}$ cwt. to allow for waste. Were it possible to persuade the farmers to send their hay to market made up in trusses, each car might easily carry two of the present loose loads, and it would be easier handled, and with less waste.

Rough tallow, from the butcher, is sold at fifteen pound to the stone.

Wool, sixteen pound to the stone, and seven stone to the hundred.

Land

Land is measured by a rod, pole, or perch, of seven yards in length, and the square acre contains 160 square perch, or 7,840 yards, which is nearly in proportion as ten Irish to sixteen English acres.

The affize and weight of wheaten bread are ascertained according to the following table, which weight shall be good during three days after the same is baked; clerks to make returns to the chief magistrates of the middle price of wheat and flour each week, allowing $29\frac{1}{2}$ stone of all kind of flour as an equivalent to a quarter of wheat, and they settle the affize of bread accordingly, allowing to the baker not less than nine shillings, nor more than fifteen shillings per quarter; each quarter valued at thirty-seven stone and seven pound of household bread.

A TABLE

A TABLE

OF THE

ASSIZE OF BREAD,

IN POUNDS, OUNCES, AND DRACHMS, AVOIRDUPOIS WEIGHT.

Price of 1 barrel.			Sixpenny loaf.			Twelve- penny loaf.			Price of 1 barrel.			Sixpenny loaf.			Twelve- penny loaf.		
£.	s.	d.	lb.	oz.	drms	lb.	oz.	drms	£.	s.	d.	lb.	oz.	drms	lb.	oz.	drms
1	0	0	6	9	0	13	2	0	1	16	0	3	10	2	7	4	5
1	1	0	6	4	0	12	8	0	1	17	0	3	8	6	7	1	4
1	2	0	5	15	3	11	14	7	1	18	0	3	7	2	6	14	4
1	3	0	5	11	3	11	6	6	1	19	0	3	5	6	6	11	5
1	4	0	5	7	4	10	15	0	2	0	0	3	4	4	6	9	0
1	5	0	5	4	0	10	8	0	2	1	0	3	3	1	6	6	3
1	6	0	5	0	6	10	1	4	2	2	0	3	2	0	6	4	0
1	7	0	4	13	6	9	11	4	2	3	0	3	0	6	6	1	5
1	8	0	4	11	0	9	6	0	2	4	0	2	15	5	5	15	3
1	9	0	4	8	3	9	0	6	2	5	0	2	14	5	5	13	2
1	10	0	4	6	0	8	12	0	2	6	0	2	13	5	5	11	3
1	11	0	4	3	5	8	7	3	2	7	0	2	12	5	5	9	2
1	12	0	4	1	5	8	3	2	2	8	0	2	11	6	5	7	4
1	13	0	3	15	5	7	15	2	2	9	0	2	10	6	5	5	5
1	14	0	3	13	6	7	11	4	2	10	0	2	10	0	5	4	0
1	15	0	3	12	0	7	8	0									

✱ The affize of white bread is calculated at two-thirds of the household affize.

Lime

Lime Measure.

The barrel of roche lime, by the Irish statute, is forty gallons, of $217\frac{6}{16}$ cubic inches each.

Coal Measure.

Enacted in the first year of George II. (1727), prohibiting the admeasurement of any coal brought into Ireland, but in vessels of the following dimensions :

	Bottom	Top at least	Winchester Measure
Half-barrel,	24 inches,	$25\frac{1}{2}$ inches,	20 gallons.
Bushel,	20 ditto,	21 ditto,	10 ditto.
Half-bushel,	15 ditto,	16 ditto,	5 ditto.
Peck,	11 ditto,	12 ditto,	$2\frac{1}{2}$ ditto.
Half-peck,	$10\frac{1}{2}$ ditto,	$11\frac{1}{2}$ ditto,	$1\frac{1}{4}$ ditto.

The half-peck is made ten inches and a half in the bottom, and sometimes nine inches and a quarter in the top, but generally no more than nine inches. This is contrived by making the peck and half-peck of the same staves, in a conical form, with one bottom near the centre, common to both ; and, as the peck is generally of proper dimensions, being one inch wider at the top than in the bottom, the half-peck, at the other end, must be the reverse shape ; and in order to make it hold the

the proper quantity of liquid (the only criterion, at present, to prove its legality), it is made of such a length, that, instead of being one inch wider in the top than in the bottom, it is two inches and a half narrower, by which the buyer is defrauded of more than one-fifth of his due, in the purchase of the thirty-second part of a barrel of coals.

Special Report of the Effects of the Encouragement, given by the Dublin Society, for Planting, in the County of Dublin, since the Year 1786, where Security has been given to preserve the same for ten Years, from the Date of the Grant.

James Ruffel, for planting three acres of oak, in 1793.

In June 1801, I viewed the above-mentioned three acres very particularly; when they were first planted for the premium, they were placed in rows of about fifteen feet asunder. Mr. Ruffel, being in the nursery business, planted these intervals close with beech, larch, and other trees, to sell as opportunity served; but the nursery business having declined, owing to the disturbed state of the country, and no demand for the trees, they were most of them permitted to remain in the same situation, until they overtopped the oaks, and thereby retarded their growth; those only, that were on the

the borders, and received the benefit of the sun and air, are in a thriving state.

Right Hon. David Latouche ; enclosing ten acres in 1794.

This plantation has been kept in a high state of preservation, and no beast suffered into the enclosure since they were first ranged out ; they have been also, at proper intervals, thinned, and transplanted into other parts, to make room for the remainder.

This plantation is in great preservation, well fenced from cattle, and every year thinned, to give room to the rest, and transplanted into other parts of the demesne. This gentleman plants out, from a nursery of his own, ten or twelve thousand trees, of various descriptions, from four to seven years old, every year.

This survey of the above plantations was made
by me in June 1801.

J. ARCHER.

APPENDIX.

APPENDIX.

NO. I.

IRRIGATION.

THIS is a business, which begins to be better understood than formerly. It is now adopted in small districts of two or three miles compass, while other parts know nothing of the matter. It will improve poor land to equal value with the best, and is of more essential service than any other operation in husbandry. Those who enter spiritedly upon this modern improvement in Ireland, having the following requisites, may rely upon the most ample returns, which may, perhaps, exceed their most sanguine expectations.

The first requisite for this business is, to have a copious stream of water. If this carries with it the wash, or runs from a muddy road, or through a farm-yard, or any place that will enrich it, it will add greatly to its value. If the stream is not abundant, make a pond or reservoir

at the head of it; line it with clay if necessary, and collect every drop of water into this from ditches, &c. &c. that it is possible to obtain; as this pond fills, make use of it in the most judicious manner, in order to gain the utmost advantage, that can be derived from a parsimonious supply.

Where water abounds, it may supersede the necessity of a reservoir; but this must be guided by circumstances.

The second requisite to this valuable improvement is, a moderate fall, or descent in the ground. By these means it can at any time be laid dry when necessary, which is of great importance, for reasons I shall hereafter shew. By skilful management, this will speedily increase the value of any land, in a four-fold degree; it will create an astonishing verdure, and early growth of rich luxuriant grass, not to be surpassed by any, the most expensive and laborious dunging, and will produce fine pasture for early ewes and lambs, a full month sooner than on any other soil, so early as the beginning of March. The contrast between this, and, perhaps, nearly barren adjoining land, that has not, or, perhaps, cannot be irrigated, will be a striking and convincing proof of the utility of this mode of management. No water should be suffered to escape through ditches, without being collected, and diverted over some place; every exertion of art should be employed for so beneficial a purpose.

If

If a reservoir is formed, and marle or peat be convenient, it would be an excellent practice to throw a quantity of it from time to time into it, and, with poles, or long large rakes, to mix it through the water, in its progress to irrigation. Water has the best effect, to run rapidly, and no where to stagnate.

The watering of ground destroys all coarse, worthless, and improper plants, and, instead of them the finest herbage and grass will flourish, and the depth of rich soil be perpetually augmenting and improving.

Some cautions, however, must be attended to. If the soil is naturally wet, it must be previously drained; a number of small flood-gates must be provided, one main one for the first entrance of the water into the irrigating trench, and smaller ones, to be placed every ten, fifteen, or twenty yards, as may be found necessary, to disperse the water completely over every depending part. A triangular level, with a span of about twelve feet, will be a necessary instrument for laying out the water-courses. Within about twelve inches of the bottom, there must be a cross lath, marked with graduated inches, for the plumb-line to play upon, in order to mark the precise fall for conveying the water. If there be a considerable distance from the *head* watering-stream to the bottom of the field, that is under this management, parallel courses must be made, to about twenty or thirty feet distance, to again take up the water, in order to distribute it more equally, which it would not do by having too long a run, but would be liable to collect into partial spots,

spots, which a second parallel will prevent, and so on to a third, if necessary, or even a fourth, till the water is exhausted, or all its vegetative advantages extracted, or deposited between the roots or blades of the grafs. If water enough cannot be obtained to go over the field at once, water it by turns, and give it a full stream. If it be given in too small quantities, it will encourage the growth of rushes and other aqueous plants.

The most advantageous time for watering is in floods, as the water at that time abounds with vegetative particles. Water at intervals the year round, with the exception only, that it may injure a crop of grafs nearly fit to cut for hay, or even half grown; in this instance it is proper to refrain. It will, nevertheless, be always prudent to have some commanding ground under pasture, to occupy the stream of water. The forming a good judgment of the time to continue water on the ground, is of material consequence; when it forms bubbles, and a white scum, it is an indication of putrefaction having commenced on the roots, and, of course, vegetation stopped; in this case, it must be immediately withdrawn, and the ground laid as dry as possible for a week or ten days, and then commence again, if it cannot be thrown over land, that may want it more. It is supposed that land, watered during the three summer months, will cause the rot in sheep, but, that watering the other nine months has the contrary effect. All I shall observe further upon this article is, that if
ewes

ewes and lambs be turned upon this grafs, it should not be with empty bellies, nor before the dew is off. After eating down the early crop, give it a good watering, and leave it for hay.

APPENDIX.

NO. II.

Mr. Donald Stewart, itinerant Mineralogist to the Dublin Society, gives the following Account of the Mines of the County of Dublin.

“IN the bank of the Royal Canal, on the lands of Portertstown, is *manganese*, of good quality : there is a bed of it, eighteen inches thick, in the rock ; it is not hard nor heavy ; on trial, at the glass-house of Mr. Thomas Braughall, it gave a most beautiful colour.

In the same townland, are *yellow* and *brown ochres*, and rich *iron ore*, in great abundance ; near which are two regular courses of *lead ore*, and one which appears to be copper.

In the deep drain, to let the water out of the canal, near the head of the great cut through the rock, at Portertstown, are *coal cavers*, and *coal smute* ; so good a situation deserves a trial, by boring.

In many places along that canal, are blue and brown *marle*, and *lime-stone gravel*, in great abundance; the blue marle was tried, and found to be good.*

In the bed and banks of the river Dargle, are soft black *slates*, that taste very strong of alum, and in several places, high banks of rich *lime-stone gravel*, and blue *marle*; I found the acid fermented strong on them all.

In several places in Lord Powerscourt's estate, in the neighbourhood of his demesne, is a string of *copper ore*, in a hard jasper rock, in a very steep precipice, in a narrow glen; and very white, flinty *spar*, which may be valuable to china manufacturers.

On the sea-shore, from the deer-park of Rochestown, to the water foot, that runs into the sea, near Bray, is rich blue *marle*, and *lime-stone gravel*.

In Lambay island, are strong indications of *coal*, and near the North point of the island, is a regular large coule of reddish soft earth, very rich in iron, which makes a good red painting stuff.

Hill of Howth.—Here is a fine *white clay*, in a large cliff, on the sea shore: grass and herbs grow very luxuriantly

* In making the canal at Porterstown, a quantity of fine purple marle was thrown upon the bank; this was of so pure a nature, and such a beautiful colour, that a paper-stainer had a car-load for a trial, for colouring walls, which succeeded so well, that, if Mr. Troy, the proprietor, chose, he informed me he could make a considerable advantage of it, by converting it to that use, for which it was so well adapted.

In the same range, for a considerable extent, are great quantities of good *lime-stone*. If coal could be had in this neighbourhood, with the above advantages, what an accumulation of wealth it might yield? J. A.

riantly on it, which indicates a good manure; it is a good plaster for out-scoring of houses, as was proved by trial; it is very hard, and as white as any Portland stone. There are small veins of good *manganese*, in large rocks of rich black iron ore, facing the Dublin Lighthouse.*

In the high cliff, near the bathing-house, in Howth, is a large stratum of remarkable *black clay*, which burns white, and resembles that at Liscanor bay, in the county of Clare; the miners drove on, and at about ten yards came to coal.

In the cliff, on the sea shore, a little to the North of the old building in Howth, is remarkable good *potter's clay*, in great abundance; it is a good clay for fire-brick, and, being so near the harbour, would be valuable to a pottery. Here are also *yellow and brown ochres*, in great abundance.

On the top of the mountain, in a wet flat, I discovered rich *blue marle*, that will be very valuable for the dry gravelly land near it.

In the demesne of Thomas Cobb, Esq. at New-bridge, near Swords, inside and outside of the wall, I discovered a green-coloured *rock*, in large blocks: it is very hard, and takes a polish.

Yellow

* Between Stillorgan and Kilmacud, I observed a chalybeate spring, and, on a close examination, I found on the surface, some ash-coloured ponderous *manganese*, easily broken.

J. A.

* *Yellow ochre*, on the sea-shore, near the bathing-house belonging to Mr. Palmer, near Rush, and adjoining it is good umber-coloured fine *earth*.

In a large deep drain, through rock and gravel, near Mr. Palmer's bathing-house, is a stratum of heavy, dark-coloured *stones*, and many other kinds, as *rotten-stone*, &c. Near the sea shore, there are small metallic specks in the stones.

In the Seamark, a little to the North from said bathing-house, is a regular course between the other rocks, ten yards broad, as fine as any hone-stone, of a 'light colour.

In a level, on the sea shore, near Skerries, on the estate of James Hamilton, Esq. I discovered a remarkable fine *white earth*, as soapy as any fuller's earth, two feet wide: the stratum between hard horn slate rock.

In said level, fine *yellow clay*, mixed with white,

On the shore, in the rocks, on the lands of Lough Shinny, are various coloured fine *earths*, yellow, reddish, purple, &c. and near Skerries, is a *blue black*.

In the cliff, on the sea shore, near the copper mine of Lough Shinny, is a large body of fine *crystals*, where a
boat

* The yellow ochre abounds in the northern parts of the county, in no part more than about the Naul. I saw pits sunk within half a mile of the Naul, where it was obtained, of a very good quality, and in great abundance; the vein was nine feet thick, and was ignorantly taken for marle, and raised for the purpose of manure, but was afterwards bought, casked up, and exported to England. J. A.

boat may get near to be loaded, and some of them may be quarried large.*

In the sea-mark, near the mearing between Lough Shinny and Hacketstown, are various coloured fine *earths*, and a dun-coloured *rock*, in a regular course, ten yards broad, between the other lime-stone rocks, and it appears to be a strong and durable stone, and in thick beds: it may be good building stone; there are several cliffs on that shore, of beautiful blue-coloured stone, that are lying nearly on an edge, and are very easy to quarry, where vessels may lie safe to load; this is between Rush and Skerries; they are beautiful stones for building, having smooth sides.

In the three islands at Skerries, are beautiful coloured *slate rocks*, particularly in Patrick's Island, at the old church. I found strings of *lead ore*, and *sulphur* in two of the islands.

On the shore, near Balbriggen, is beautiful blue-coloured *slate rock*, that splits easy, and very even in surface; and near the slate rock, is a grey-coloured *rock*, with some *spar* through it; the acid fermented strong on it, and burned into lime; it contains a good deal of sand; but there is rich *lime-stone gravel* there in great abundance.

On

* About twenty-five years ago, a company of gentlemen expended some money here, in boring for *coals*: on an unfavourable report of some English miners, who had examined the strata, they desisted.—Was it the interest of the English miners to encourage the company to proceed?

On the sea shore, about a mile North of Balbriggen, is a *slate rock*, which, I am informed, has since turned out a good quarry, in blocks, large enough to make ton flates.

On the shore, a little South, from where I found the lime-stone rocks, near Balbriggen, is a regular vein of *sparry micaceous stones*, running through hone-stone rock, like lead or copper; it is two feet wide, lies on an edge, and runs into the sea, nearly South and North; it makes pure, clear, crystal-glass; and near this is a small vein of *copper* and *sulphur*.

On the sea shore, near the quay, at Portrane, opposite to Lambay island, is a large stratum of *coal slate*, full of sulphur, forming a bed six feet thick, between slate rocks.

On the same shore, within three hundred yards of this coal slate, is a *rock* of various colours, red, blue and white; and *micaceous sulphureous stones*, mixed with *white spar*, all which burned white in the fire. A skilful potter from Staffordshire informed me, that it is a valuable clay for the China manufactory; this clay is in great abundance.

A reddish, micaceous, heavy earth, is in a cliff, a little to the South of the level shore, near Skerries; there is a stratum of it, three feet thick, in a gravelly cliff; Mr. Dean extracted silver from it.

In the lands of Garristown, fourteen miles from Dublin, on the estate of Richard Talbot, Esq. on either side of that high ground, I found strong indications of
coal;

coal; but the strata lie more horizontally on the South side of the hill, in a deep cut made by the water, on the side of the road, known by the name of the Back-lane, and where a seam of *smute*, nine inches thick, and the clay under it approaches nearly to the Stourbridge clay; and from the many spas and manganese, on either side of the hill, especially at the commons, where the strong mineral spring-well is, and a great body of manganese, strong in iron and yellow ochre, formed by the spring-water, and the turf in the bog, having a remarkable strong smell of sulphur in the fire, *coal* is most probably in the neighbouring lands, if not under the bog. The late Colonel Talbot sunk a shaft near the summit of the hill; I wish he had done it in the commons, near where the coal-smute appears, and the strata are more favourable, and where very likely the quick-sand is not. He bored through, viz.

			Feet.	Inches.
1.	Loose stone and slates,	- - -	35	0
2.	Micaceous rock, and small veins of slate,		24	0
3.	Then boring with the augur, found free-			
	stone,	- - -	10	0
4.	Slate,	- - -	3	9
5.	Free-stone,	- - -	9	3
6.	Hard metal rock,	- - -	1	6
7.	Slate,	- - -	17	0
8.	Grit-rock,	- - -	3	0
				<hr/>
				103 6

Brought

			Feet.	Inches.
	Brought forward,		103	6
9. Slate,	-	-	1	0
10. Grit, level more horizontal,	-	-	5	1
11. Slate and spar,	-	-	1	8
12. Grit-rock,	-	-	3	0
13. Blue soft-rock,	-	-	1	0
14. Grit-rock,	-	-	13	0
15. Slate,	-	-	0	9
16. Hard micaceous grit-rock,	-	-	3	0
17. Blue grit,	-	-	1	0
18. Hard metal, do.	-	-	0	9
19. Grit,	-	-	3	0
20. Slate,	-	-	0	9
21. Slate, and a small line of grit,	-	-	5	0
22. Slate,	-	-	2	0
23. Rock hard grit,	-	-	2	0
24. Quick sand,	-	-	4	6
			<hr/>	
Total,			151	0

On the sea shore, near Rush, at Mr. Palmer's bathing house, is a regular course of heavy *glimmering stones*, with black shining specks in it: I hope it is a species of tin mine.

In the cliff, a little to the North, from said bathing-house, are *yellow* and *brown ochres* in great abundance.

Near

Near Ballymore-Eustace, in the face of a fine grazing hill, is spring-water, that petrifies even grass and moss: they are found in great abundance, hard formed, like a honey-comb, from the top to the bottom of this running water, which appears red at a distance. At same place, along the banks of the river Liffey, are large banks of concretion of sand and small stones; the acid fermented on it as on lime-stone.*

In the bank of said river, in the commons, is a large body of fine *soapy clay*, and *yellow and brown ochres*; this clay forms a course at the bottom of the hill, twelve feet wide, between its solid walls of slaty rock, and near it, is a large vein of *white spar*, which crosses the river, and may lead to metal, either *lead* or *copper*.

In the lands of Ardnanod, in the bed and banks of the river, near the corn-mill, I discovered *slate rocks* of good quality and colour. I examined the slate quarries
near

* Doctor Ruty, among the mineral petrifications, mentions a kind of rock-marle, or a petrification, resembling an artificial plaister, but harder, on the North side of the *Liffey*, on the side of a bank near *Knockmaroon*, and on the banks of the *Dodder*. It broke white within, effervesced strongly with acids, and burned to a lime.

Petrifications, or stony incrustations, of vast extent, formed by water dribbling along the rocks, upon the stones, in a cave on the shore near *Portrane*, where is a petrifying spring. From the same rocks were collected white stony incrustations, with a tincture of green; they effervesced strongly with acids, and were reduced to a strong lime in half an hour, previously burning blue and purple from the sulphur, to which the greenish cast seemed to be owing. J. A.

near Dunlavan, and was astonished to see, that the men sink from ten to eighteen feet deep, through rotten slate rocks, before they get any useful slate.

On the sea shore, at Mallahide, near the harbour, is black *lime-stone* in large blocks, and some very sound; there are beds of *grey lime-stone*, brown-coloured *lime-stone*, and yellowish *lime-stone*; I have not seen so great a variety in any one place. *Lead ore*, in a quarry on the South side of the high lands, from the bay of Mallahide.*

s

The

* From the bottom of a deep grave, dug in James's church-yard, this spring (1801), a large lump of lead ore was thrown up, which I had a short time in my possession, but was obliged to return it to the person, who picked it up.

This, with other accounts given by Doctor Rutty, shews, that lead ore abounds, both in the neighbourhood of the city, and in several other parts of the county, and that the ore, in many places, is rich in silver. The Doctor informs us, that lead ore has been formerly found at a quarry near *Stephen's-green*, on the road to the Black Rock, and at a quarry at *Dolphin's-barn*, half an ounce whereof, being fluxed with equal parts of pot-ashes, gave a drachm and a half of pure lead. And, at another quarry adjoining the commons of Kilmainham, there were raised, in the years 1767 and 1768, in the space of about eighteen months, sixty or seventy tons of lead ore, which yielded about twelve cwt. of lead from each ton of ore, and about twenty-four ounces of silver from each ton of lead. There are two or three veins of lead ore in the quarry, all of them seeming to take their course into the commons: upon one of these veins in the commons, some miners, in the year 1769, were at work, and raised upwards of ten ton of ore; they found it within three feet of the surface of the ground, and did not work deeper than about twenty-eight feet, on account of the obstruction by water. It is supposed, that the ore, they then raised, would produce

The copper mines of Loughshinny have been but poorly worked, but very rich ore was got, and a large course of it runs into the estate of Mr. Palmer of Rush, where it was never worked, nor any trials made; this is a valuable mine, on the shore near Rush and Skerries.

In the shore of Dalkey, a lead mine was worked, and a smelt-house built. About half a mile South, from that work, in the high cliffs, at the deer-park, Rochestown, I discovered a regular vein of *terra ponderosa*,
with

produce the same quantity of lead and silver as the ore above-mentioned. One of these veins seems to take its course towards the mountains.

Lead ore has been also found at Kilmainham, being probably a continuation of the same vein from Dolphin's-barn; and in the Phenix-park, near Castleknock, there are lead and copper ores, and also near the old castle of Castleknock, there is lead ore, at the N. E. side; a mine was opened there in 1744, by Edward Ford, Esq., and on some of the stones were green spots, indicating a mixture of copper. Likewise at or near Dubber, and at Dunfink, are both lead and copper ores, and some very rich ore at Cloghran church. Lead ore is also found on the Hill of Howth, and a vein of it on the shore, about midway between Lord Howth's house and the Lighthouse.

On the North strand, almost opposite to an old quarry, near Cloptarf town, are two or three veins of lead ore.

A lead-course near *Crab-lough*, formerly wrought by Captain Vernon. Near Dalkey a lead mine, where, it is said, some hundred tons of ore have been raised formerly. In Killiney Bay a work was begun in the year 1751; the ore was said to be rich, and to contain a considerable quantity of silver. On the demesne of St. Catherine's, a lead vein was discovered, and formerly wrought by the late Sir Samuel Cooke.

Lead ore is of singular use for making the black glazing of pots, which alone are used for pickles, not suffering the pickle to transude, as it does through other glazings.

Lead, when refined for silver, and reduced into litharge, is used in making of window and flint glass. J. A.

with specks of lead in it: and in said vein, or course, are heavy *stones*, with rose-coloured spots in them. I hope cobalt will be got there.*

* I found a vein of pale brown burnishing stone, in a quarry west of Chapel-izod, that answers for polishing silver or brass perfectly well, having been repeatedly used for that purpose by a silver-smith in Dublin; the vein is from eighteen to twenty inches in thickness. I made some fruitless enquiries to find out the person, who used it, and the only information I could get was, that it was repeatedly procured from the quarry, and answered the intention. J. A.

APPENDIX.

NO. III.

AN ARGUMENT AGAINST EMIGRATION.

THE agriculture of Ireland is materially affected by the emigration of the deluded populace to America. Having some knowledge of the nature and result of this business, I may presume to offer a dissuasive in behalf of those itinerant adventurers. The frivolous advantages to be expected, are but a small recompense for the hazards they undergo, not one in a hundred ever making the change for the better ; it is too late to recede when they see their error ; they are then mostly deprived of the means of returning, together with the shame they would incur by such a measure, and so much loss of time.

In May 1796, a man named Laurence M'Shane, a shoemaker, was in the jail of Derry for being active in fomenting a revolution, and forwarding the business of United Irishmen, for which he was apprehended, tried, convicted, and sentenced to transportation ; but, in
consideration

consideration of his former character for sobriety, industry, and integrity, the magistrates prevailed on the judge to permit him to banish himself to America. Accordingly he sailed thither, but returned in the year 1798, and was immediately taken up, and lodged in the jail of Derry. He was asked why he ventured to return, when he knew, that his life was forfeited by such conduct. His answer was, that he would prefer the risk of the loss of life to living in America. Being desired to explain himself fully, he said, he went to America, conceiving it to be a land of perfect freedom, and thinking, that the cause he had embarked in in Ireland would procure him an hearty welcome, he mounted a green cockade on his landing at Philadelphia, and, confident of a kind reception, marched with some other United Irishmen through the city, but wondered at not only not being invited to some friendly house, but, on enquiring for lodgings, received many scornful denials, till producing that universal introducer, a good purse of guineas, he got admittance into a public house, in which he lived, and then got the yellow fever, from which when he recovered, he sought for work, his money being almost all expended, but a long time without success, observing that, while any other hand could be procured, he, being an Irishman, was without employment. At length some of his countrymen, long settled and established there, made up the price of his passage, and he returned, declaring that he preferred living in an Irish

Irish prison to American independence or American inhospitality.

The imaginary happiness, supposed to follow such a visionary scheme, is not worth a moment's recollection. The cultivation of one acre of our own wastes or commons at home would produce more real comfort and satisfaction, than that of ten acres might probably do upon so vague an establishment, or, than the most sanguine should expect in the common course of events, if not placed on a better foundation. But how many are there, that live to see those chimerical wants supplied?

The moment a man forms the determination of quitting his native country, he suffers himself to be guided at pleasure by every silly companion, that thinks proper to intrude his opinion. The first step he takes is, to go to the master of some of those American vessels, that are on the "white slave trade;"* the master, of course, as his object and interest is to get a cargo of passengers, tells him every thing he can devise or invent, to recommend the country and the land, and, when on board, charges each individual, that is able to pay, six guineas at least for his passage, with bad usage during his being on board; they appear very moderate in their charges in this country, but, on their arrival in America, they violate every stipulation, and sell these unhappy redemptioners † for a sum, which their perpetual slavery will scarcely

* So called by the Americans.

† Redemptioners are those, who are unable to pay their passage, and agree to be sold until the same is discharged.

scarcely repay, by exacting any sum they choose. How shamefully are they imposed on! A gentleman, now resident in Dublin, agreed with a master of an American vessel, at the Cape of Good Hope, for himself and servant's passage to New York, for 250 dollars; when he arrived there, the master demanded nine hundred dollars, for which he marked a writ; argument was to no purpose, he was arrested for that sum, and bail was entered by the British consul. Upon consulting a lawyer, he was informed, that it would cost him the whole to defend himself, and that the probability was, that he would be finally cast, and obliged to pay debt and costs; that the most prudent mode for him, as a stranger, would be to pay the demand without further hesitation. Witnesses are not sworn; they only hold out their arm and affirm; this custom is not confined to the Quakers.

But by what means are they to subsist, if they are able to get clear of this imposition, on the first entering on their new establishment, which they will probably be obliged to take up many miles removed from every human being? They will there probably have to build a log-house, and provide implements of various kinds; subsistence must be procured, until crops can be raised; but man cannot live of bread alone; clothes, and a variety of *requisites* of life will be wanting, and a combination of circumstances, impossible to foresee, will multiply his necessities.

The current price of diet and lodging at New-York, and all the principal towns of America, is as follows;

follows: At the Tontine coffee-house, fourteen dollars per week; at the top boarding houses twenty dollars per ditto; mechanics, and all the lower class, pay eight or nine dollars per week! The duties upon every article are extravagant, far exceeding any thing in Ireland. There is no regularity in carrying on their business, though a great bustle is always to be observed, that a stranger might imagine there were affairs in hand of the highest importance. How can any person thrive, when shackled, and exposed to infinite dangers? Those, who intend to turn their attention to agriculture, will find, that all the *good* and *indifferent* lands are long since occupied, and what now remains are *barren sands*, *unwholesome morasses*, *mountains*, and refuse spots, heretofore rejected as unprofitable for any person to obtain a living from; and yet a man can live better here upon sixpence, than he can there upon two shillings, the necessities of life being so much dearer, and harder to be procured there than here; choose what situation he will, and it will be attended with inconvenience, losses, and delays; but a thirst for variety, whilst thousands of acres lie uncultivated at home, hurries him to his ruin. But again, the change of climate, which, under these circumstances, may be well supposed to be for the worse, together with the yellow fever and fluxes, which carry off thousands suddenly in the most shocking condition, and other disorders incident to the country, never fail to occasion such a mortality, that, on an average, one out of every three, that go over, dies before two years elapse

elapse from their first setting out, and with all this Mr. Weld, in his Travels through America, gives us a picture of wretchedness and poverty, to be met with every where by the weary traveller; there is nothing to eat at any of their inns, but rancid fish, fat salt pork, and bread made of Indian corn.

On a stranger's landing at any of the great towns, he is naturally inclined to view the place, and in his perambulations, a female commonly watches his course, and perhaps, in twenty-four hours after his landing, goes to a magistrate, affirms that she met him in such a place, that he seduced her, and that she is in consequence with child by him. Without the least previous notice, he is arrested for an hundred dollars, which he must either pay immediately, go to jail, or find good security for. How is a stranger to obtain this security? Numbers of women lay themselves out for this kind of traffic, and gain a good livelihood by it.

Let those wanderers after uncultivated desarts seriously reflect, and impartially consider every consequence; let them also turn their thoughts to the additional comfort and support they will shortly experience at home, in their native country, from the exertions, that are now making in the improvement of agriculture and cattle, which will meliorate their condition, and that of the community at large, beyond any thing of the kind hitherto experienced. Let those, who are now dispirited, wait patiently the event, and they will soon find a flow of wealth and satisfaction, not to be surpassed by any emigration,

emigration, and which will be acquired without the danger of it.

Mr. Weld, in travelling through the woods in Canada, saw a bark hut apparently inhabited; on going up to it, his surprise was not small to find two men, whose appearance and manners at once bespoke them not to be Americans. After some conversation, he discovered them to be two Englishmen, who had formerly lived in London as *valets de chambre*, and having scraped together a little money, had set out for New York, where they expected at once to become great men; however, they soon found, to their cost, that the expense of living in that city was not suited to their pockets, and they determined to go and settle in the back country. They were at no loss to find persons, who had land to dispose of, and happening to fall in with a jobber, who owned some of those lands, and who painted to them in lively colours the advantage they would derive from settling on good land, already cleared to their hand, they immediately purchased a considerable tract of this barren ground, at a round price, and set out to fix themselves upon it. From the neighbouring settlements, which were about ten miles off, they procured the assistance of two men, who, after having built for them the bark hut, in which he found them, left them, with a promise of returning in a short time to erect a log-house. They had not, however, been punctual to their word, and unable to wield an axe, or do any one thing for themselves, these unfortunate wretches sat moping in their hut, supporting themselves

themselves on some salt provisions they had brought with them, but which were now nearly exhausted. The people in the settlement, whom, says Mr. Weld, on arriving there, we asked some few questions respecting these poor creatures, turned them into the greatest ridicule imaginable; and indeed they did present a most shocking picture of the folly of any man's attempting to settle in America, without being well acquainted with the country previously, and also competent to do every sort of work himself. Mr. Weld informs us, he left the country without a sigh, and without entertaining the slightest wish to revisit it.

Might not those of landed property throw out encouragement to assist the efforts of wandering genius, and eradicate from their minds the false notions of aggrandizement of those, who wish to advance their situation by so precarious a mode as emigration, and, by liberal acts of support in improvements at home, attach them to their native soil, and establish them upon a more solid basis of universal benevolence? Assiduous cultivation of the land would create a mutual interest amongst all ranks, and increase the population and riches of the country. Agriculture will henceforth be conducted upon scientific principles, and thousands of acres, hitherto deemed unprofitable, will, by these efforts, be consigned to luxuriant and profitable crops, that will amply reward the labours of the husbandman.



APPENDIX.

NO. IV.

THE seeds of emulation in agriculture are sown, and making such a happy progress, that not only individuals, but the gentlemen at large, seem to vie with each other, who shall extend it in the most beneficial manner; and, as far as human foresight can penetrate, our now barren mountains, bogs, and wastes, will in a short time have the features of their original appearance entirely effaced, and, instead of those rugged, swampy, and worthless tracts we now behold, a beautiful improved country, with fine cattle, and luxuriant crops, will one day, and that not far distant, present itself to our view, while the improvers will enjoy the fruits of their labour, and the honour of having so well contributed to the lasting welfare of Ireland.* It requires no sophistry to shew

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the

* See a Scheme for the improvement of bogs, and other waste lands in Ireland, by a company of undertakers, Transactions of the Dublin Society, Vol. 2. Part 1.

the numerous advantages that will result, by conforming to these new improvements.

IRRIGATION.

The Right Hon. David Latouche is making a rapid progress in that principal of all improvements, *irrigation*, lately commenced, under the inspection of Mr. Dutton, at his beautiful seat at Marlay; he has already accomplished eight or nine acres of catch-work, at the expence of about five guineas an acre, and with an immediate and very visible good effect. In order to gain the utmost advantage of the river, a level was begun at Captain Southwell's, at the Little Dargle, about half an English mile distant, which gained a considerable height in the demesne, and by which means the above number of acres will be added to the improvement.

The irrigation upon this demesne, when completed, will exceed an hundred acres, and, when we consider the comparatively trifling expence, that this may be accomplished for, (the level above-mentioned being finished), no money can undoubtedly be laid out to *equal* advantage. It will occasion an *increased* value, in *one* year, of four pounds an acre, with a regular ratio of improvement, so long as the practice is continued! What an increase of food, and, consequently, stock, will be thus obtained! A farmer, that knows the mode
of

of improvement, possesses the means, and neglects bringing it into action, deserves not to enjoy one acre of ground. ■

Mr. Dutton has also effected a very material improvement, in thinning the plantations in the above demefne; a business much neglected in this country, and of great consequence in training the trees to a proper growth.

APPENDIX.

NO. V.

SHEEP-FOLDING.

George Grierfon, Esq. is conducting an improvement, upon the true principles of good husbandry; he folds two hundred sheep upon his farm the year through,* they are allowed a square yard to each; by these means, and shifting the hurdles every night, the two hundred sheep manure an acre every forty days, or nine acres a year. Mr. Grierfon has great merit in this business, as he takes the lead in this county in that improvement. The acquisition of nine acres of well manured ground, annually, is no trifling acquisition upon a farm; but he has a similar business, upon a smaller scale, on his demesne, two miles from his farm, where he folds sixty on the same plan as at the farm.

* Shelter must be attended to in bad weather.

STALL-FEEDING.

The following is the weekly Average of the Food of twenty-three stall-feeding Oxen, at the Farm of George Grierson, Esq. for seventeen Weeks, commencing the 13th Day of December 1800, to the 11th of April 1801, when they were begun to be sold.

1800.	Hay.		Turnips.		Oil-cake.		Cabbages		AVERAGE.
	stone	lbs.	stone	lbs.	stone	lbs.	stone	lbs.	
Dec. 13,	234	—	169	7	—	—	—	—	Weekly to 23,
to	33	6	24	3	—	—	—	—	Daily to ditto
20,	1	6	1	1	—	—	—	—	Daily to each.
— 20,	278	—	446	7	—	—	—	—	"
to	39	10	63	11	—	—	—	—	ditto.
27,	1	10	2	10	—	—	—	—	"
— 27,	248	—	559	—	10	7	—	—	ditto.
to	35	6	79	12	1	7	—	—	"
Jan. 3,	1	7½	3	6½	—	1	—	—	ditto.
— 3,	172	—	906	7	67	2	—	—	"
to	24	8	129	7	9	8	—	—	ditto.
10,	1	1	5	8½	—	6	—	—	"
1801.									
— 10,	176	—	777	—	102	7	—	—	ditto.
to	25	2	111	—	14	9	—	—	
17,	1	1	4	11½	—	9	—	—	
— 17,	192	—	723	—	105	—	—	—	ditto.
to	27	6	103	4	15	—	—	—	
24,	1	2½	4	7	—	9	—	—	
— 24,	128	—	697	6	115	—	—	—	ditto.
to	18	4	99	9	16	6	—	—	
31,	—	11	4	4½	—	10	—	—	

1801.	Hay.		Turnips.		Oil-cake.		Cabbages		AVERAGE.
	stone	lbs.	stone	lbs.	stone	lbs.	stone	lbs.	
Jan. 31,	128	—	209	6	155	—	93	7	Weekly to 23, Daily to ditto. Daily to each.
to	18	4	29	13	22	2	13	5	
Feb. 7,	—	11	1	4	—	13 $\frac{1}{2}$	—	8	
7,	112	—	178	1	147	5	30	—	ditto.
to	16	—	25	6	21	1	4	4	
14,	—	23 $\frac{1}{2}$	1	1 $\frac{1}{2}$	—	12	—	2 $\frac{1}{2}$	
14,	128	—	238	10	181	3	44	—	ditto.
to	18	4	34	1 $\frac{1}{2}$	26	0	6	4	
21,	—	11	1	6 $\frac{1}{2}$	1	2	—	3 $\frac{1}{2}$	
21,	96	—	173	2	169	1	60	—	ditto.
to	13	10	24	10	24	2	8	8	
28,	—	8	1	1	1	3 $\frac{3}{4}$	—	5	
28,	128	—	220	11	171	—	62	—	ditto.
to	18	4	31	7 $\frac{1}{2}$	24	6	8	12	
March 7,	—	11	1	5	1	1	—	5 $\frac{1}{2}$	
7,	96	—	256	—	129	—	90	—	ditto.
to	13	10	36	8	58	6	13	—	
14,	—	8	1	8	2	1 $\frac{1}{2}$	—	8	
14,	128	—	159	8	141	7	215	—	ditto.
to	18	4	22	11	20	3	30	10	
21,	—	11	—	14	—	12	1	4 $\frac{1}{2}$	
21,	128	—	66	2	121	7	110	—	ditto.
to	18	4	9	6	17	5	15	10	
28,	—	11	—	5 $\frac{1}{2}$	—	10 $\frac{1}{2}$	—	9 $\frac{1}{2}$	
28,	160	—	—	—	149	—	160	—	ditto.
to	22	12	—	—	21	4	22	12	
April 4,	—	14	—	—	—	13	—	14	
4,	160	—	—	—	134	7	260	—	ditto.
to	22	12	—	—	19	2	37	2	
11,	—	14	—	—	—	11 $\frac{1}{2}$	1	8 $\frac{1}{2}$	

HORTICULTURE.

Mr. Grierfon is also entering upon another improvement worthy of attention; he is converting a field of three acres, upon his demefne at Rathfarnham, into a kitchen-garden, which he propofes to cultivate with the plough. When we confider the faving of labour in this mode, it is affuredly a great object; but, when the fact is, that the ground will be better tilled with the plough than the fpade, it deferves the moft ferious attention. No perfon acquainted with the common laborious method of cultivating a garden, but muft know the method practifed by the diggers, of fipping over large portions of ground, and throwing frefh earth over it, to make it appear to have been frefh dug, and to defraud the employer of fo much time idled away, when opportunity offered. Cabbage-plants, inftead of being dibbled, are laid carefully on the fide of the furrow, and, as the plough returns, it covers the roots with accuracy and difpatch. There are fome ftalls for feeding cattle adjoining to this new improvement, where all fpare garden-ftuff will be conveniently adapted to the feeding of his flock.

Mr.

Mr. Grierson has great merit in these improvements, as also for his valuable stock of cattle, sheep, and swine, with which the public were highly gratified at the November shew. Such stock, with other excellent rural management, will amply recompense him for these spirited exertions.

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